CORROSTOP-15 IN Raft Foundation

CORROSTOP-15

4 IN 1 CORROSION INHIBITING CONCRETE ADMIXTURE

1. CORROSION PRTECTION OF TMT
2. WATER PROOFING
3. MINIMISE OF HAIR LINE CRACKS IN RCC ROOFING
4. ARREST OF HAIR CRACKS DURING WALL PLASTERING WITH M-SAND

CORROSTOP-15 IN PILE Foundation

APPROVED BY CHENNAI METRO RAIL LTD

ABOUT

OUR COMPANY

WWW.LAALCHEMICALS.COM

Laal Chemicals is a distinguished and recognized Chennai based construction chemicals manufacturer and supplier, serving customers since 2014.

With an unrelenting focus on customer centricity, ethical business practices and sustainable development, we have successfully introduced many products to the market and offer a variety of chemical products with diverse applications to enhance the life of building structures.

CORROSTOP-15 in Cantilever Foundation

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TESTED & APPROVED

BY

I.I.T - MADRAS

CSIR-CECRI KARAIKUDI

NCCBM HARYANA

- HIGH RESISTANT TO CORROSIVE ENVIRONMENT
- NO IMPACT TO TENSILE STRENGTH OF CONCRETE
- SLIGHT INCREASE IN COMPRESSIVE STRENGTH OF CONCRETE
- DURABILITY FACTOR OF THE LIFE OF RCC STRUCTURES IS 1.4 - 1.8
- COMPLETE SEAL OF POROSITY IN RCC

CORROSTOP-15 in Wall Footing Foundation

CORROSTOP-15 in Isolated Spread Footing Foundation

CORROSTOP-15 in RCC ROOFING

CORROSTOP-15 in RCC COLUMNS

"ULTIMATE CHOICE OF ENGINEERS FOR EXTENDED BUILDING LIFE"

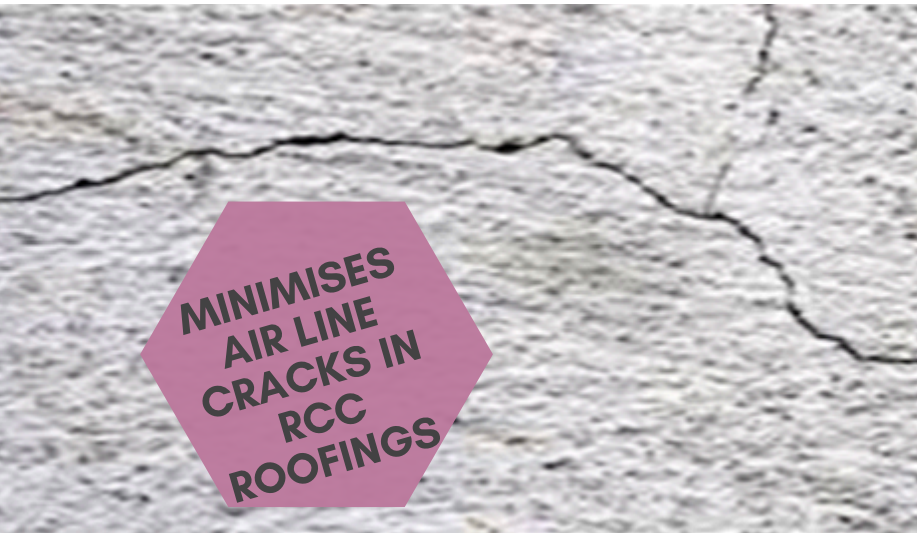
CORROSTOP-15 in CIRCULAR RCC WATER TANK

CORROSTOP-15 in UNDER GROUND RCC WATER TANK

CORROSTOP-15 in STP RCC UNDER GROUND WATER TANK

CORROSTOP-15 in PUBLIC RCC WATER TANK

- NO IMPACT WHEN USED WITH OTHER WATER PROOFING CHEMICALS OR SUPER PLASTICIZERS
- COMPATIBLE WITH OTHER GRADES OF CONCRETE



IRON ROD IN WATER

WITHOUT CORROSTOP-15

WITH CORROSTOP-15

CORROSTOP-15 IS A BIPOLAR CONCRETE PENETRATING CORROSION INHIBITING ADMIXTURE TO PROTECT THE EMBEDDED STEEL REINFORCEMENT IN CONCRETE FROM CORROSION AS PER THE DESIGN SPECIFIED BY RDSO ((RESEARCH DESIGNS & STANDARDS ORGANISATION MANAK NAGAR , LUCKNOW – 226 011) SPECIFICATION NO NO. M&C/PCN/126/2020. IT CAN BE USED IN ALL REINFORCED CEMENT CONCRETE STRUCTURES BUT NOT LIMITED TO

1. BELOW GROUND STRUCTURE SUCH AS PILE, PILE CAP, MAT FOUNDATION WHERE CHLORIDE THRESHOLD VALUE IS MORE IN THE SOIL.
2. BRIDGES AND FLYOVERS
3. STRUCTURES IN COASTAL AREAS AND SUBMERGED CONDITIONS
4. POWER PLANTS
5. STEEL PLANTS
6. HIGH RISE BUILDINGS
7. STRUCTURES IN SEA WATER
8. PRE-CAST ELEMENTS
9. TUNNELS AND UNDERGROUND STRUCTURES

ADVANTAGES:

1. NITRITES OR NITRATES FREE
2. BIPOLAR 100% STEEL PROTECTION AGAINST CORROSION INSIDE RCC (REINFORCED CEMENT CONCRETE) STRUCTURES
3. CHEMICALLY INHIBITS THE CORROSIVE ACTION OF CHLORIDES ON REINFORCING STEEL INSIDE THE CONCRETE
4. INCREASES THE LIFE OF REINFORCED CEMENT CONCRETE (RCC) STRUCTURES BY 40% TO 80% DEPENDING UPON THE ATMOSPHERIC CORROSION (DURABILITY FACTOR OF RCC 1.40 - 1.80 AS PER CECRI TEST REPORTS)
5. COMPLETELY SEALS THE INVISIBLE PORES INSIDE THE CONCRETE AND LEAVES A DENSE LAYER THERE BY COMPLETELY ARRESTING THE WATER PERMEABILITY AND HENCE WATER PROOFING IS TAKEN CARE.
6. MINIMISES THE FORMATION OF AIR LINE CRACKS WHILE LAYING CONCRETE OVER RCC ROOFING OR FLOORING
7. AVOIDS FORMATION OF AIR CRACKS DURING INTERIOR OR EXTERIOR CEMENT WALL PLASTERING ESPECIALLY USING MANUFACTURING SAND (M-SAND)
8. INCREASES SLIGHTLY THE COMPRESSION STRENGTH WITHOUT IMPACTING THE TENSILE STRENGTH OF CONCRETE

ACTION MECHANISM:

CORROSTOP-15 WHEN MIXED WHILE LAYING CONCRETE, THE CHEMICAL IONS PRESENT IN CORROSTOP-15 GETS ATTRACTED BY THE IRON REBAR & FORMS AN INVISIBLE ,STRONG & DURABLE PROTECTIVE FILM AROUND THE TMT INSIDE RCC STRUCTURES THERE BY PROTECTING THE IRON REBAR AGAINST RUST AND CORROSION.

TECHNICAL INFORMATION:

Colour	Pale Yellow
Odour	Odourless
pH	9-11
Solubility in Water	Very Easily Soluble in Water
Density	1.04 - 1.06
Chloride Ion Content	Less than 0.2%
Viscosity	12 Seconds (Ford cup No.4)
Dosage Range	250 ml per bag of cement of 50 Kg
Compatability	Compatabile with all types of Cement and all grade of Concrete

Flash Point	**Above 100 Degree Celsius**
Combustible	No
Impact	No Impact when mixed with Water proofing chemical and Super Plasticizers
Effect on Concrete	Refer to the Test Reports issued by IIT-Madras , CSIR-CECRI-Karaikudi & NCCBM-Haryana
Banned Chemical	Nil
Toxic Chemical	Nil
Packing	25 Liters & 210 Liters of HDPE Barrel
Shelf Life	36 Months from the date of Manufacturing
Storage	Stored in Normal Shelter
First Aid	Strong & Saturated Solution. It slightly irritates soft sensitive skin.Hence use hand gloves while handling. In case of spillage over skin, wash the area with plenty of water and seek Doctor's advice if required

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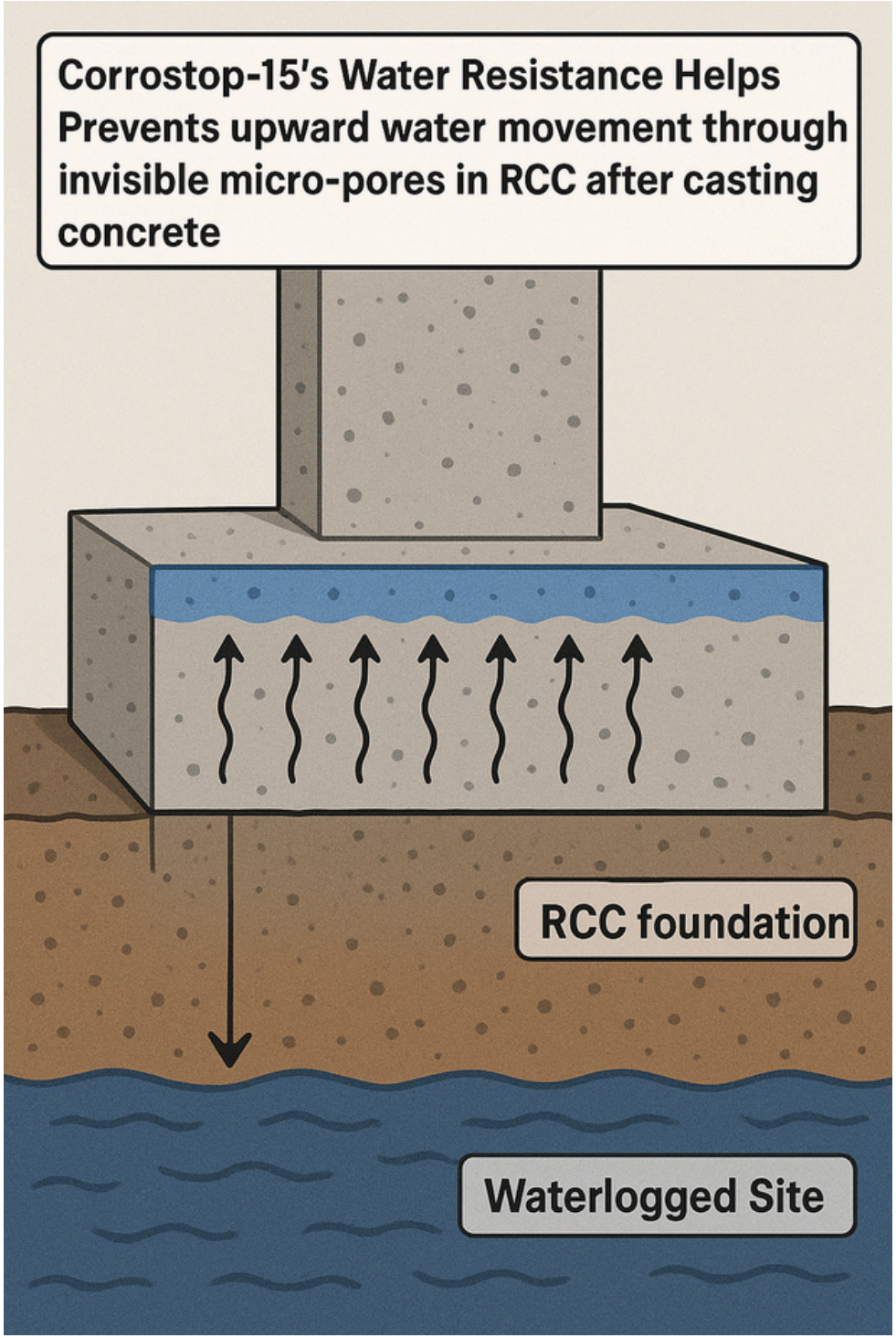
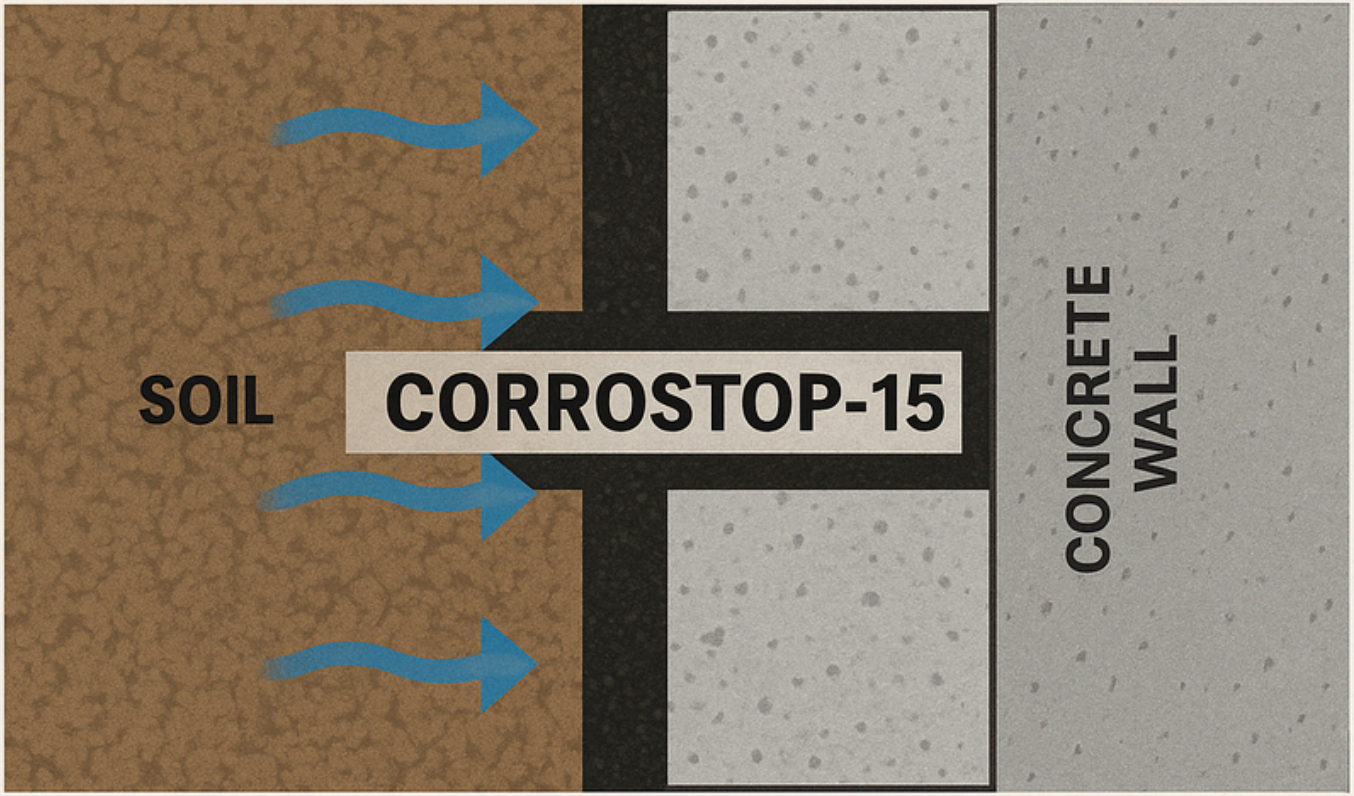
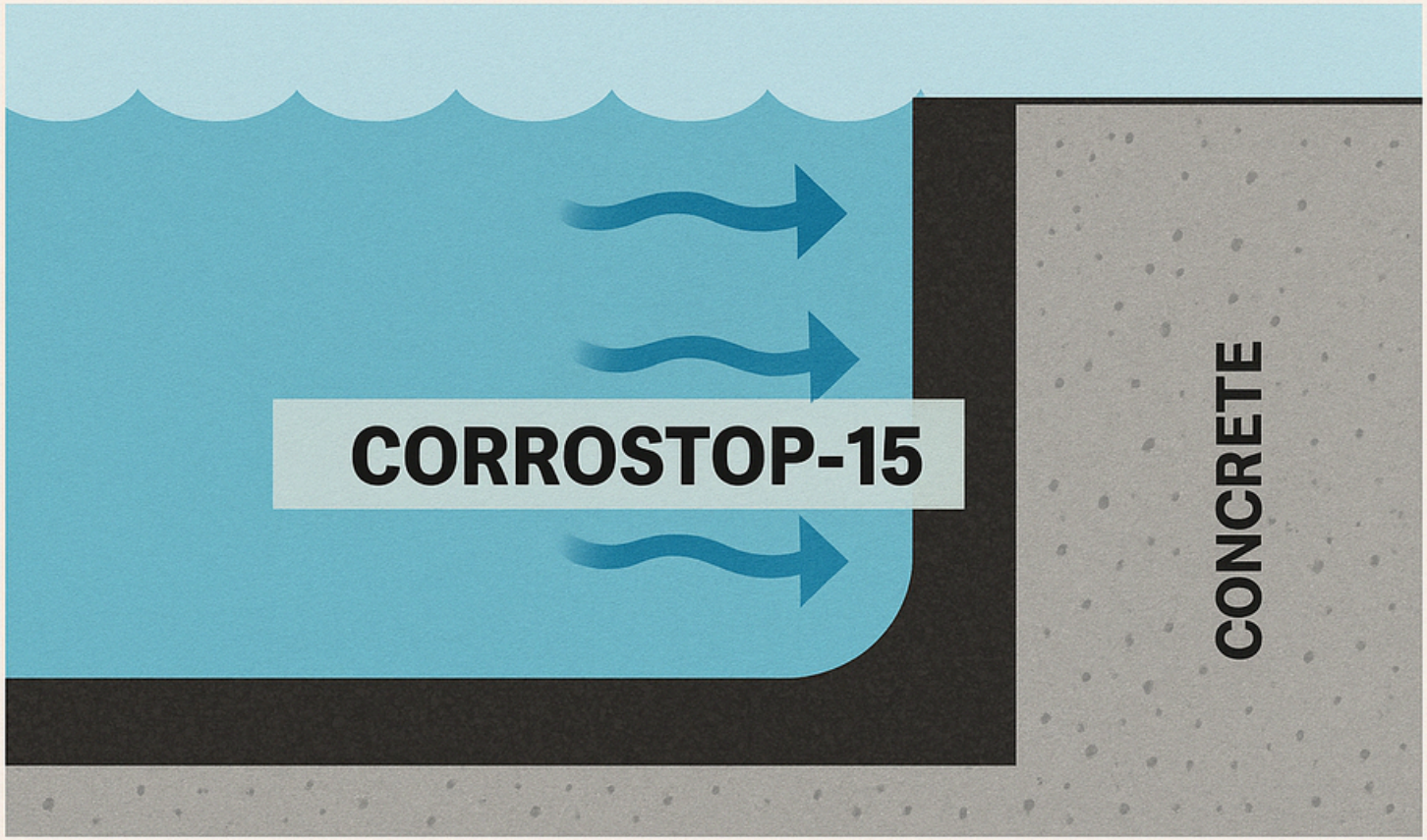


CORROSTOP-15's Water Resistance



blocks horizontal water penetration from surrounding soil into the concrete wall in Retaining Walls / Basement Walls

CORROSTOP-15's Water Resistance



Acts as an internal waterproofing barrier, reducing water seepage in Swimming Pools & Water Bodies

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CORROSTOP-15'S WATER RESISTANCE THAT SEALS THE CONCRETE MATRIX AND PROTECTS REINFORCEMENT FROM MOISTURE AND CHLORIDE IONS IN BRIDGE DECKS / FLYOVERS / ELEVATED ROADS

CORROSTOP-15's Water Resistance

A hydrophobic barrier preventing downward water movement in Podium Slabs & Garden Terraces

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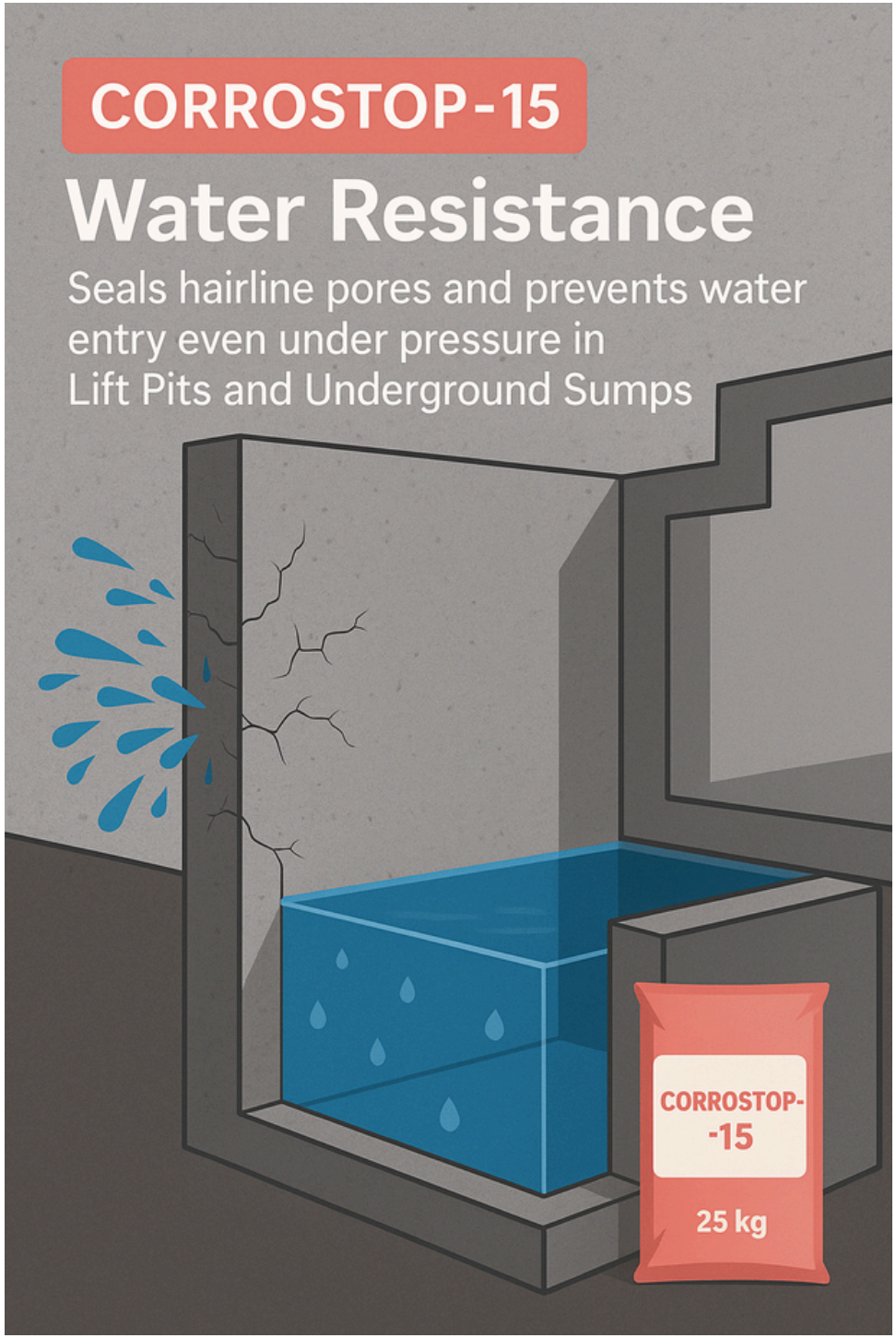

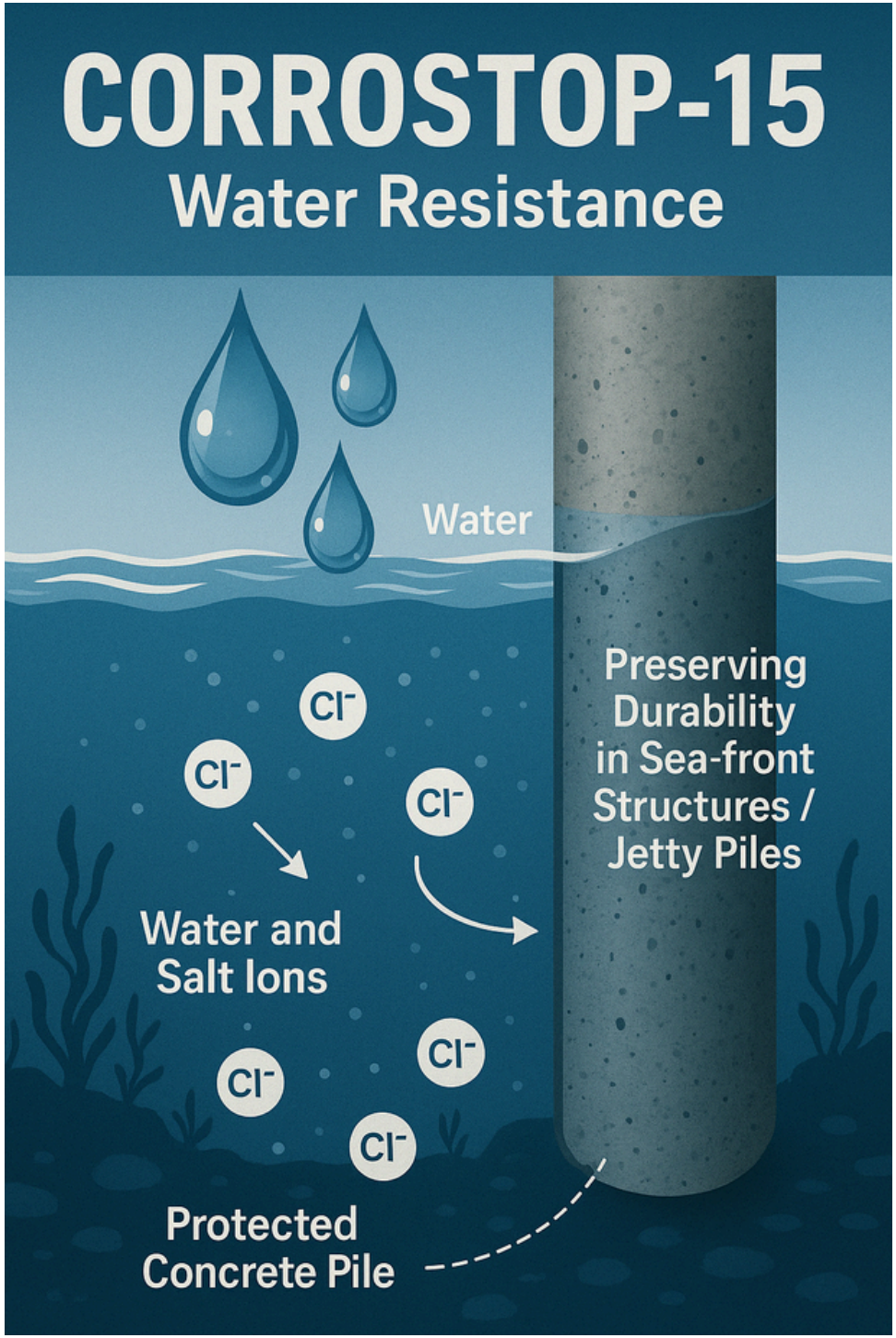

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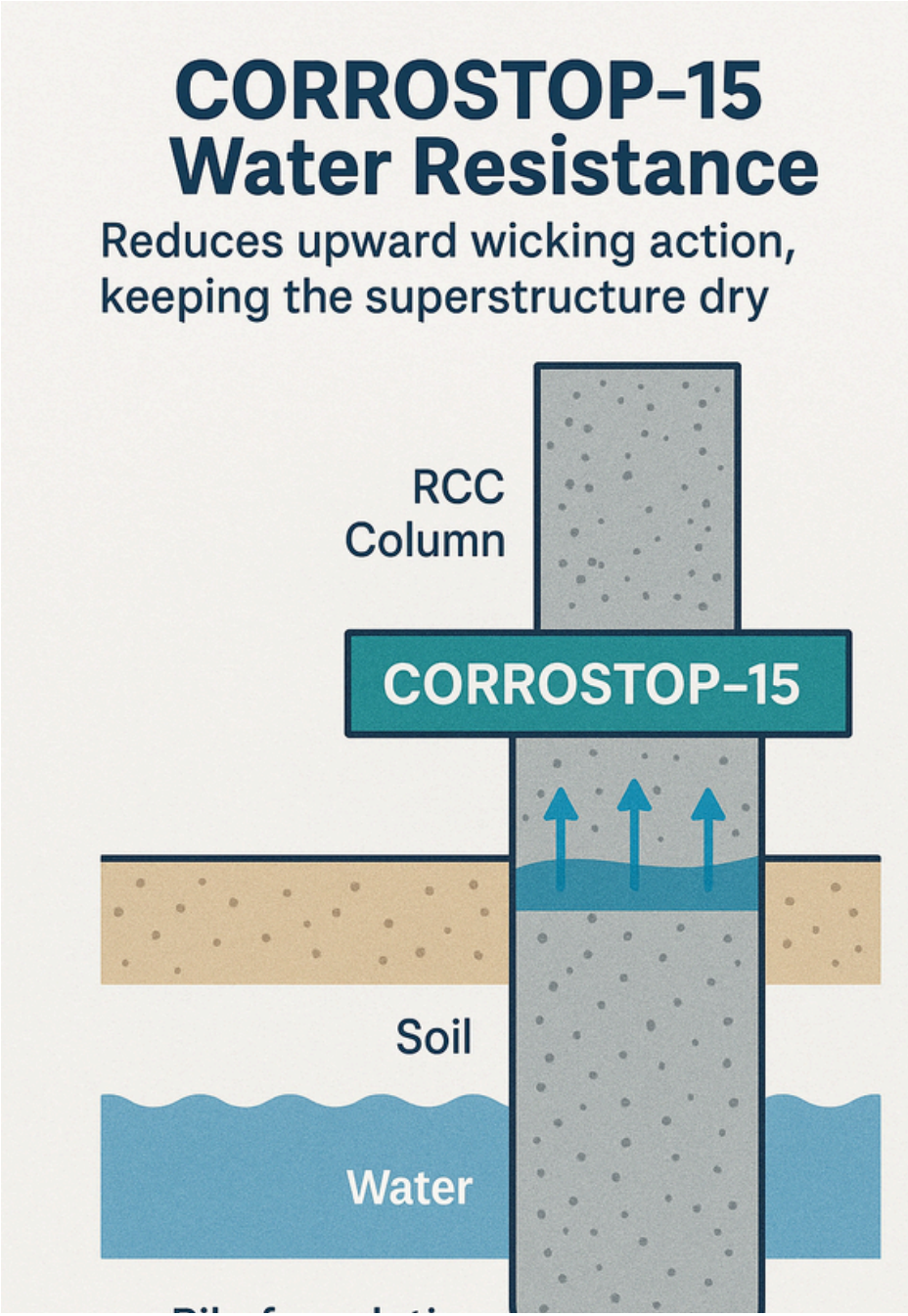

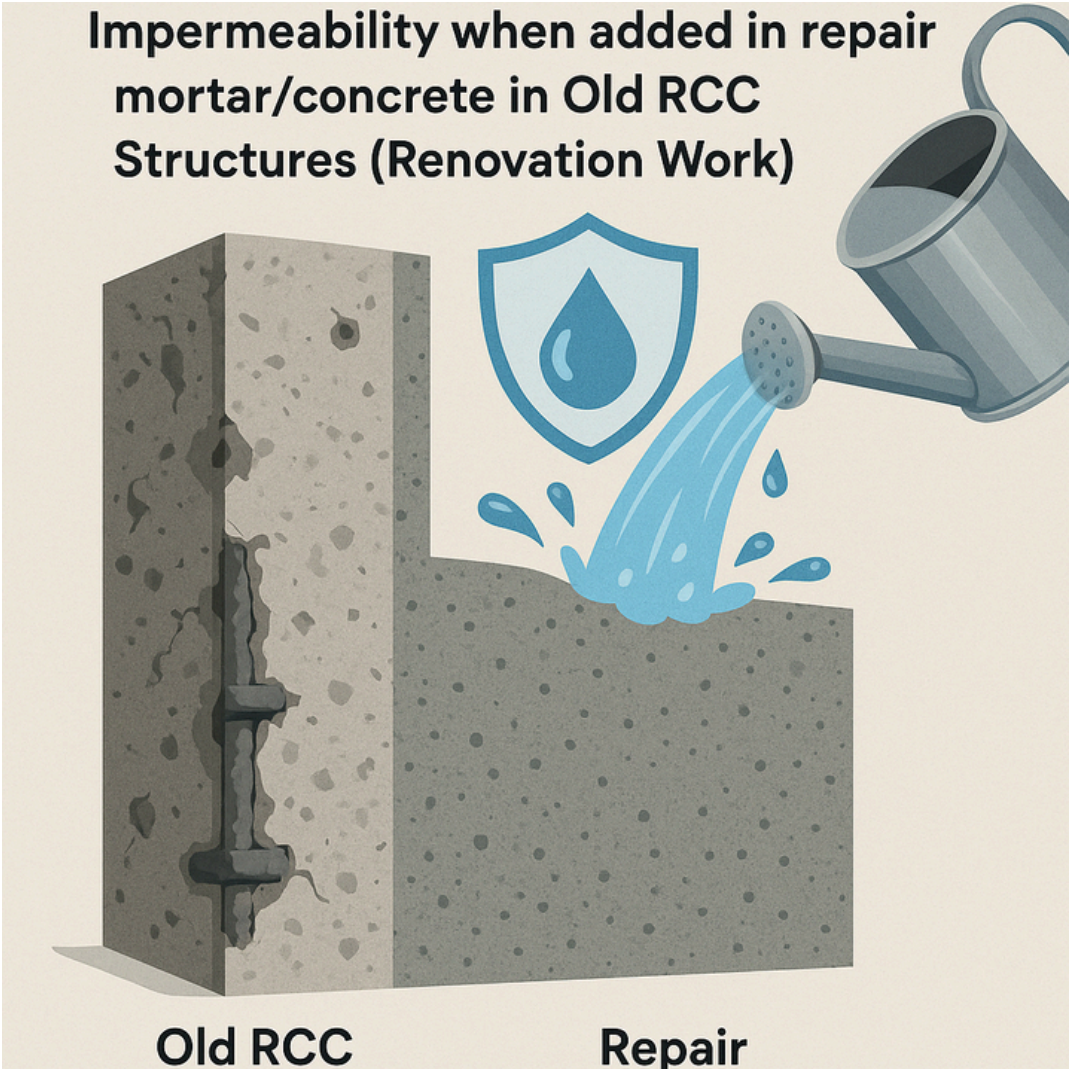

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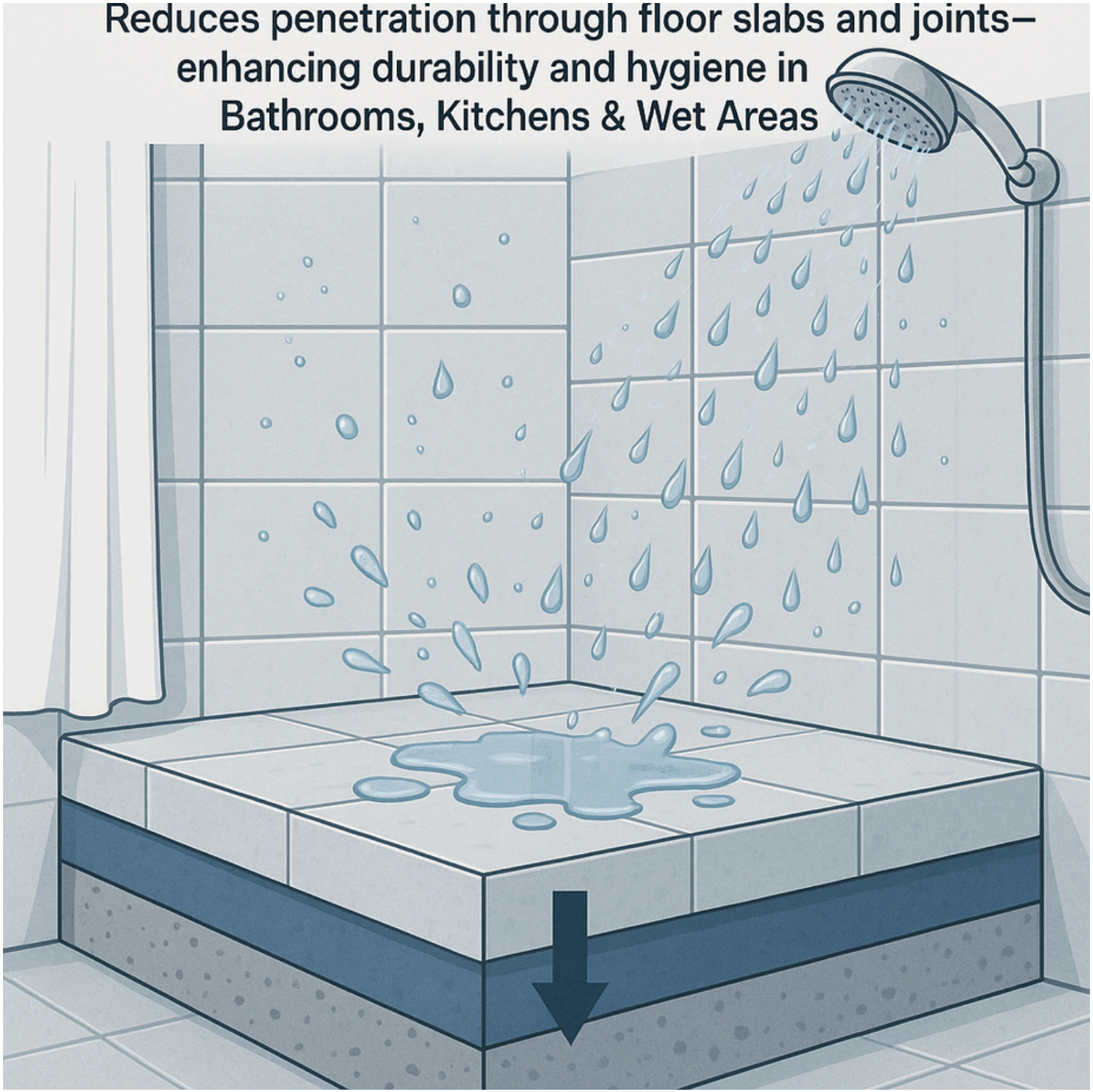

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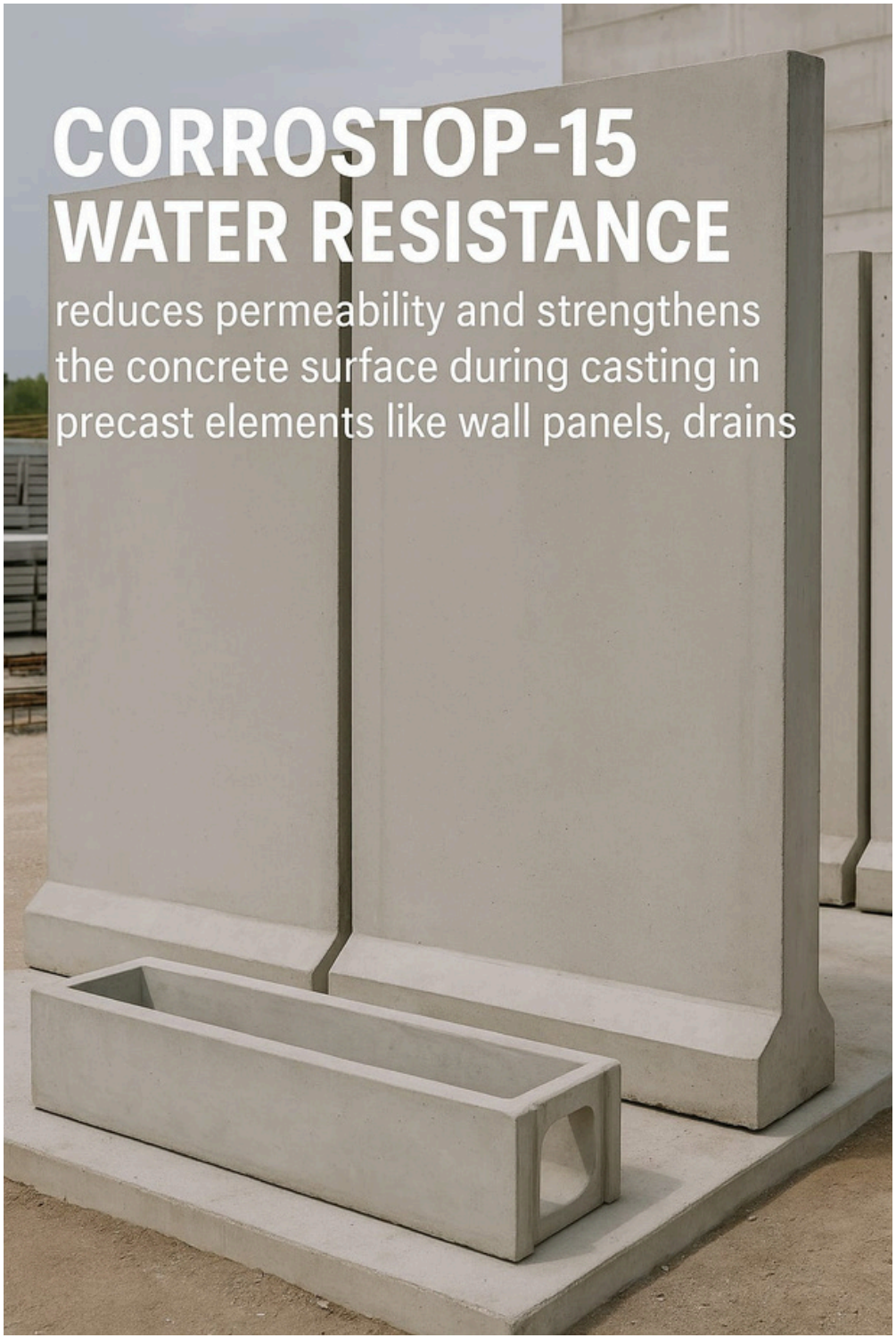

DETAILS OF TESTING OF CORROSTOP-15 IN CENTRAL GOVERMENT LABS

CORROSTOP-15 TESTED FOR CORROSION INHIBITING CONCRETE ADMIXTURE AT IIT-MADRAS

1. 28 DAYS COMPRESSION STRENGTH
2. RCPT (RAPID CHLORIDE PENETRATION TEST)
3. WATER PENETRATION TEST IN CONCRETE
4. WEIGHT LOSS OF REBAR IN 3% CHLORIDE SOLUTION
5. IMPACT OF CORROSTOP-15 WITH OTHER WATER PROOFING CHEMICALS AND SUPER PLASTICIZERS
6. COMPATABILITY WITH ALL GRADES OF CONCRETE

CORROSTOP-15 TESTED FOR CORROSION INHIBITING CONCRETE ADMIXTURE AT CSIR-CECRI-KARAIKUDI

1. INITIAL & FINAL SETTING TIME IN CONCRETE AS PER BIS 4031
2. RCPT (RAPID CHLORIDE PENETRATION TEST) AS PER ASTM C1202
3. TENSILE STRENGTH OF CONCRETE AS PER BIS 5816 - 2004
4. 28 DAYS COMPRESSION STRENGTH AS PER BIS 10262 - 2009
5. ELECTOCHEMICAL & GRAVIMETRIC WEIGHT LOSS STUDIES AS PER ASTM G 106, G 59 & G10

CORROSTOP-15 TESTED FOR BIPOLAR CONCRETE PENETRATING CORROSION INHIBITING ADMIXTURE AT CSIR-CECRI-KARAIKUDI AS PER RDSO (RESEARCH DESIGNS AND STANDARDS ORGANISATION) GUIDELINE OF INDIAN RAILWAYS IN M-30 GRADE OF CONCRETE IN PPC CEMENT

SHORT TERM TEST:

1. APPEARANCE, ODOUR, SKIN IRRITATION, PH, SPECIFIC GRAVITY AND VISCOSITY OF THE INHIBITOR.
2. ACCELERATED CORROSION TEST TO BE CARRIED OUT IN RAW WATER WITH 1% (BCPCIA) AND WITHOUT INHIBITOR FOR 21 HOURS.

LONG TERM TEST:

1. IMMERSION TEST FOR 720 HOURS (REBAR WEIGHT LOSS METHOD) WITH 1% BCPCIA AND WITHOUT BCPCIA IN RAW WATER AS PER ASTM G 1 – 03 (2017)
2. EFFECT OF CONCRETE ADMIXTURE ON COMPRESSIVE STRENGTH WITH 1% BCPCIA AND WITHOUT BCPCIA IN RAW WATER AS PER IS 9103 – 1999 (REAFFIRMED 2018 OR ITS LATEST VERSION)
3. POLARIZATION TEST BY TAFEL POLARIZATION IN 3.5% NACL WITH 1% BCPCIA AND WITHOUT BCPCIA FOR 20 DAYS AS PER ASTM G 3 - 14.
4. EFFECT OF BCPCIA ON CORROSION OF EMBEDDED STEEL REBARS EXPOSED TO CHLORIDE ENVIRONMENTS AFTER 9 CYCLES (14 DAYS WETTING AND 14 DAYS DRYING) WITH 1% BCPCIA AND WITHOUT BCPCIA AS PER ASTM G – 109.
5. THE PASSING CRITERIA / REQUIREMENTS FOR THE ENTIRE ABOVE TESTS ARE ACCORDING TO THE RDSO SPECIFICATION NO. M&C/PCN/126 / 2020 (REV.1.0) AND ASTM G109.

CORROSTOP-15 TESTED FOR PERMEABILITY CHARACTERISTICS STUDY IN CEMENT MORTAR AND CONCRETE & INTEGRAL WATER PROOFING IS 2645 AT NCCBM-HARYANA AS PER RDSO AS PER THE REQUIREMENT OF CHENNAI METRO RAIL LIMITED (CMRL)

1. RATE OF ABSORPTION OR SORPTIVITY TEST
2. VOLUME OF PERMEABLE VOIDS , BULK DENSITY , WATER ABSORPTION (AFTER IMMERSION) AS PER ASTM C 642
3. WATER PERMEABILITY TEST
4. INTEGRAL WATER PROOFING TEST AS PER IS 2645
5. CHLORIDE CONTENT TEST AS PER IS 66925

CORROSTOP-15 TESTED FOR BIPOLAR CONCRETE PENETRATING CORROSION INHIBITING ADMIXTURE AT NCCBM-HARYANA AS PER RDSO (RESEARCH DESIGNS AND STANDARDS ORGANISATION) GUIDELINE OF INDIAN RAILWAYS IN M-35 GRADE OF CONCRETE WITH 40% GGBS IN OPC CEMENT AS PER THE REQUIREMENT OF CHENNAI METRO RAIL LTD (CMRL)

1. MODIFIED ACCELERATED CORROSION TEST (BASED ON JAPANESE STANDARD JIS Z1 535
2. IMMERSION TEST FOR 720 HOURS (REBAR WEIGHT LOSS METHOD)
3. EFFECT OF CORROSION INHIBITING ADMIXTURE ON FRESH AND HARDENED CONCRETE
4. POLARIZATION TEST BY TAFEL POLARIZATION WITH 3.5% IN SODIUM CHLORIDE FOR 20 DAYS
5. EFFECT OF CORROSION INHIBITING ADMIXTURE IN RESISTING CHLORIDE ION PENETRATION AS PER AASTHO T259
6. EFFECT OF CORROSION INHIBITING ADMIXTURE IN RESISTING CHLORIDE ION PENETRATION AS PER ASTM C1202
7. LONG TERM CORROSION TEST AS PER G-109