

SMARTCARE PREAPPLY HDPE 40

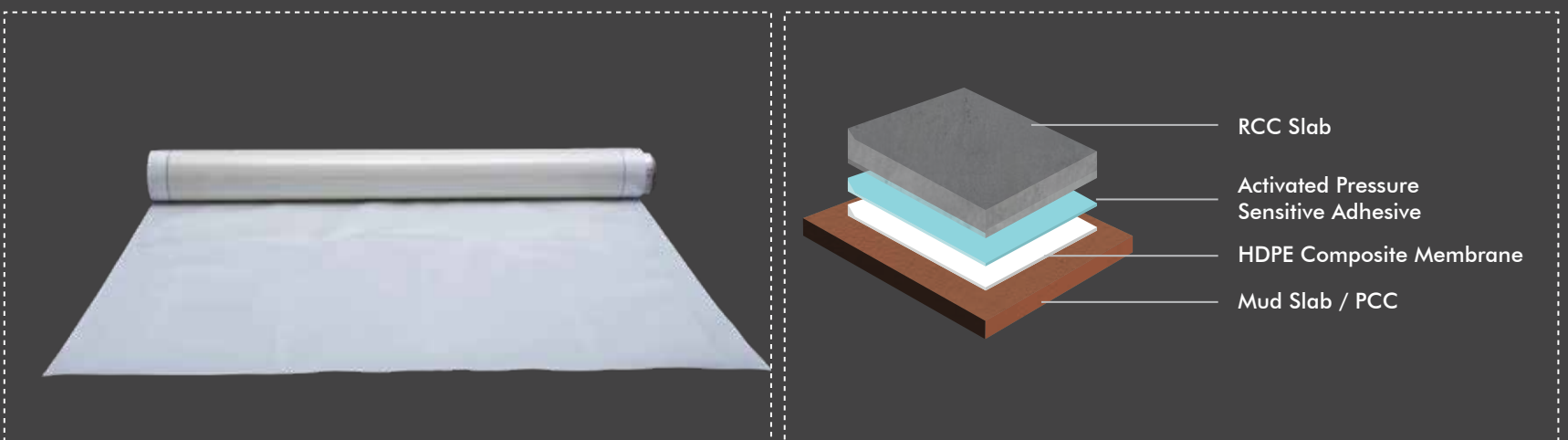
SmartCare PreApply HDPE 40 is a thick high density polyethylene membrane with a pressure-sensitive adhesive. Unlike conventional membranes, this forms a bond with the wet concrete poured over it and becomes monolithic part of the structure. This prevents water ingress tracking between the unbonded membrane and structure.

FEATURES & BENEFITS

- Continuous adhesive bond to poured concrete
- Unaffected by ground settlement
- Provides a barrier to water, moisture and gas
- Ready for placement of reinforcement bars
- Sound anti puncture performance
- Excellent chemical resistant to soil types
- Lateral water migration resistant
- Weather and UV resistant
- Resistant to acid and alkali

CHEMICAL & PHYSICAL PARAMETERS

- Membrane made of high density Polyethylene material and pressure sensitized adhesive. Protective coating and release liner is applied above this.
- Colour: White
- Dimensions: 1.2mm thickness, 1.2m width, 30m length



TECHNICAL PARAMETERS

PROPERTY	TYPICAL VALUE	TEST METHOD
Colour	White	
Thickness	1.2mm	ASTM D3767
Peel Adhesion to concrete	≥ 1200 N/m	ASTM D903 modified
Resistance to Hydrostatic Head	>70 m	ASTM D5385 modified
Low temperature Flexibility	-23 deg C Pass	ASTM D1970
Puncture Resistance	>950 N	ASTM E154
Elongation	$>500\%$	ASTM D412 modified
Tensile strength (film)	28.2MPa	ASTM D412
Crack cycling @-23 deg C	Pass	ASTM C836

CERTIFICATIONS

- CE certification
- PRI – Methane Gas permeability
- SGS – ASTM testing results

SMARTCARE PVC MEMBRANE

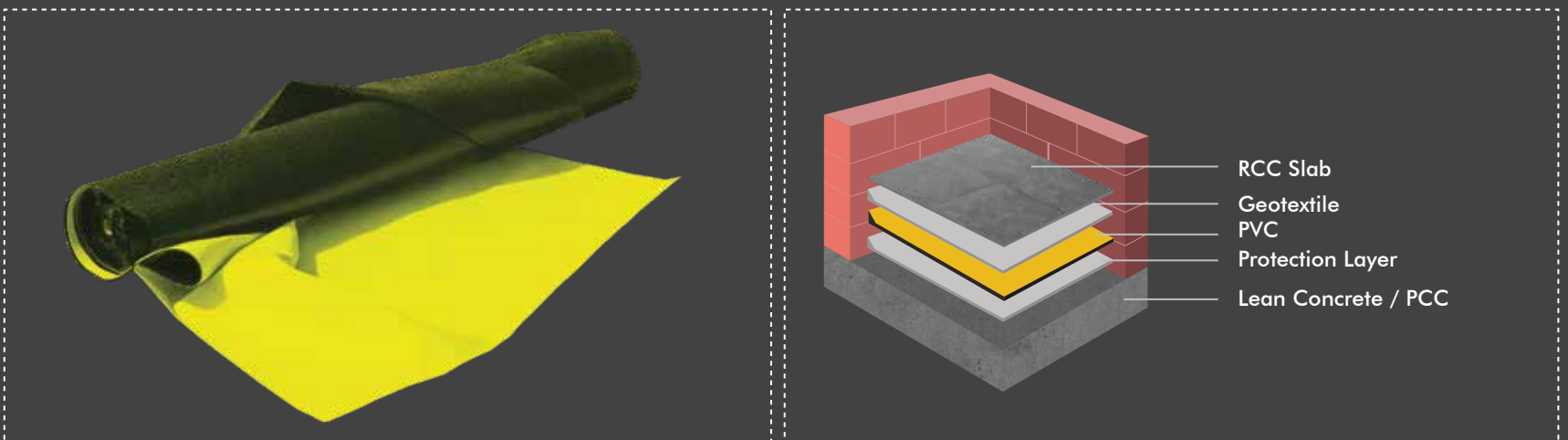
Non-reinforced Smartcare PVC Membrane, opaque, made of flexible polyvinyl chloride (PVC-P), with thin yellow signal layer, designed for tunnels and basement works. This Membrane is not suitable for permanent exposure to UV-radiation.

FEATURES & BENEFITS

- Hardly combustible
- Resistant to swelling, rotting and ageing
- Very high level of water tightness, even with permanent deformation
- High capacity for adaptation to irregularities or deformation of support due to its high deformability and weld strength
- High resistance to puncturing
- Not resistant to bitumen, oil and tar

CHEMICAL & PHYSICAL PARAMETERS

- Colour: Yellow & black
- Dimensions: 2m x 20m
- Shelf life: 5 years
- Coverage: 40sq metres



TECHNICAL PARAMETERS

PARAMETER	ASTM/TEST STANDARD USED	TYPICAL VALUE
Thickness	EN 13491	2mm
Tensile Strength	EN 13491	15N/mm ²
Elongation	EN 13491	250%
Tear Strength	EN 13491	40
Root Resistance	EN 13491	Excellent

CERTIFICATIONS

- NTH (WIP)

SMARTCARE WATERPROOFING MEMBRANE: EPDM 1.2MM

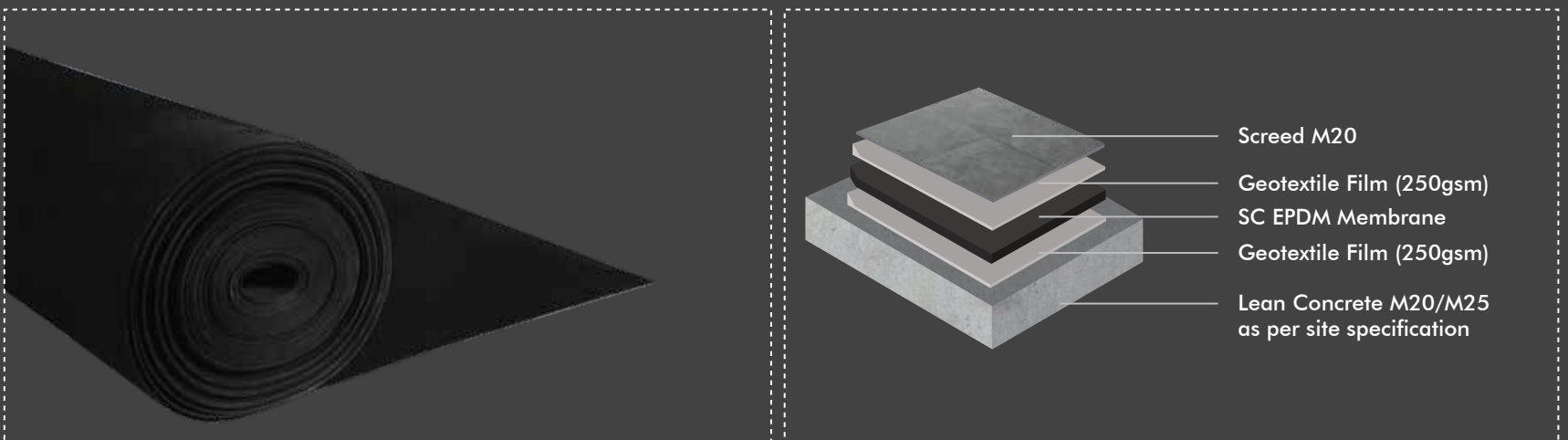
SmartCare EPDM Membrane is a performed elastomeric waterproofing membrane made up of high quality EPDM rubber. This membrane exhibits high tensile strength, elongation, tear strength and is also resistant to weathering, heat ageing, ozone, UV rays, acids, alkalis & oxygenated solvents.

FEATURES & BENEFITS

- Long service life
- High tensile and tear strength
- High elongation - more than 400%
- Zero maintenance cost provided, it is fixed as per the recommendation
- Additional dead load - negligible

CHEMICAL & PHYSICAL PARAMETERS

- Colour: Black colour textile finish rubber sheets
- Dimensions: 1.2 x 20m rolls, tolerance +/- 10%
- Approval/standards: ASTM D 4637 & ASTM D 6134
- Shelf life: 24 months under specific storage conditions



TECHNICAL PARAMETERS

PARAMETER	TESTING METHOD	STANDARD VALUES	TYPICAL VALUES
Chemical Base			EPDM
Thickness (mm)	ASTM 3767		1.3 ± 10%
Unit Weight (kg)/m ²			1.42
Tensile Strength, MPa	ASTM D 412	Min 9	Min 10 MPa
Elongation at Break (L/T)%	ASTM D 412	Min 300	Min 400
Tear Strength (lbs/inch)	ASTM D 624	Min 26.27	Min 35
Adhesion Strength (N/mm)	ASTM D 903		Min 9
Hydrostatic Water Pressure, Bars	DIN 1048	No Leakage	Passes 7
Shore 'A' Hardness	ASTM D 2240		Min 60
Elastic Recovery	ASTM D 412		Min 90

CERTIFICATIONS

STANDARD

NTH

TESTING LAB

ASTM D 4637-08

SMARTCARE WATERPROOFING MEMBRANE SBS SELF ADHESIVE 2MM, 3.5MM

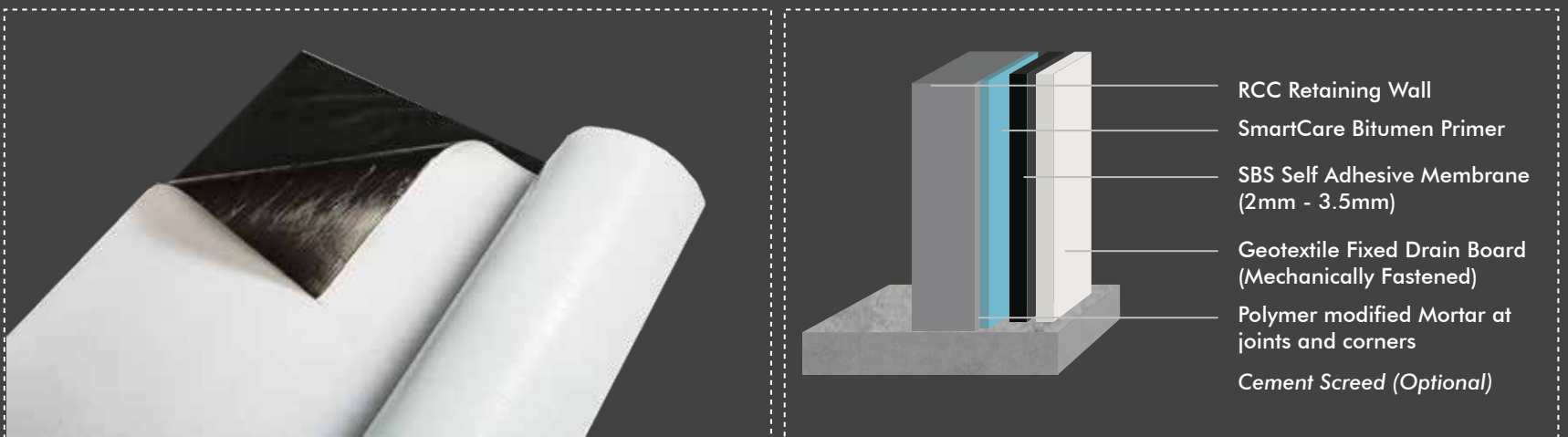
Asian Paints SmartCare Waterproofing Membrane is a SBS modified polyester sheet reinforced five layer bituminous membrane for superior waterproofing. This membrane exhibits excellent tensile strength, tear strength, puncture resistance and dimensional stability. Self Adhesive of the membrane is covered with silicone release film for protection of the membrane.

FEATURES & BENEFITS

- Excellent flexibility
- Cost effective and durable in comparison to conventional low end waterproofing systems
- Excellent water tightness if applied as per recommended system and application
- Good temperature resistance to cold and warm temperatures
- High tensile strength, tear and puncture resistance

CHEMICAL & PHYSICAL PARAMETERS

- Chemical Property: SBS modified bituminous, polyester fleece reinforced
- ASTM Standard: ASTM D 6222-08



TECHNICAL PARAMETERS

PARAMETER	TESTING METHOD	TYPICAL VALUES (2mm)	TYPICAL VALUES (3mm)
Thickness,mm	ASTM D 5147	2 ± 0.1	3 ± 0.1
Unit Weight, Kg/Sq.m	ASTM D 6164	2.617	3.207
Softening Point, (°C)	ASTM D 36	110	100
% Elongation at break, Longitudinal	ASTM D 5147	50	50
Tensile Strength Longitudinal, N/5 cm	ASTM D 5147	600	700
% Elongation at break, Transverse	ASTM D 5147	50	50
Tensile Strength Transverse, N/5 cm	ASTM D 5147	400	700
Low Temp. Flexibility, °C	ASTM D 5147	Pass at -18	Pass at -18
Tear Strength Longitudinal, N	ASTM D 4073	311	700
Tear Strength Transverse, N	ASTM D 4073	120	700

SMARTCARE APP MODIFIED POLYESTER SHEET REINFORCED BITUMINOUS MEMBRANE (2MM, 3MM, 4MM)

Asian Paints SmartCare Waterproofing Membrane is a five-layered system with APP modified polyester fleece reinforced bituminous membrane for superior waterproofing. This membrane exhibits excellent tensile strength, tear strength, puncture resistance and dimensional stability. The torch side of the membrane is covered with polyethylene film for protection of the membrane.

FEATURES & BENEFITS

- Excellent flexibility
- Cost effective and durable in comparison to conventional low end waterproofing systems
- Excellent water tightness if applied as per recommended system and application
- Good temperature resistance to cold and warm temperatures
- High tensile strength, tear and puncture resistance

CHEMICAL & PHYSICAL PARAMETERS

- Chemical Property: APP modified bituminous, polyester fleece reinforced
- ASTM Standard: ASTM D 6222-08



CERTIFICATIONS

STANDARD	TESTING LAB
NTH	ASTM 5147

TECHNICAL PARAMETERS

PARAMETER	TYPICAL VALUES		
	2mm PY	3mm PY	4mm PY
Sample Description	2mm PY	3mm PY	4mm PY
Top Face	Plain Finish	Plain Finish	Plain Finish
Thickness, mm	2	3	4
Unit Weight, Kg/m ²	Min 2.5	Min 3.0	Min 3.90
Tensile Strength (N/5cm), Longitudinal	500	600	650
Tensile Strength (N/5cm), Transverse	450	550	600
% Elongation at break, Longitudinal	30	45	45
% Elongation at break, Transverse	30	40	40
Tear Strength, Transverse	400	350	330
Tear Strength, Longitudinal	250	320	320
Low Temp Flexibility, 0OC	No Cracking	No Cracking	No Cracking
Softening Point (OC)	> 150	> 150	> 150
Compound Stability at 110OC, 2 hrs	No Flow	No Flow	No Flow
Dimensional Stability, 80OC	No change	No change	No change
Resistant to Water Pressure @ 5Bar	No Leakage	No Leakage	No Leakage
% Water Absorption	Max 3	Max 3	Max 3
Lap Joint Strength, Longitudinal	550	650	650
Lap Joint Strength, Transverse	450	550	600

SMARTCARE FLEXI SEAL PU

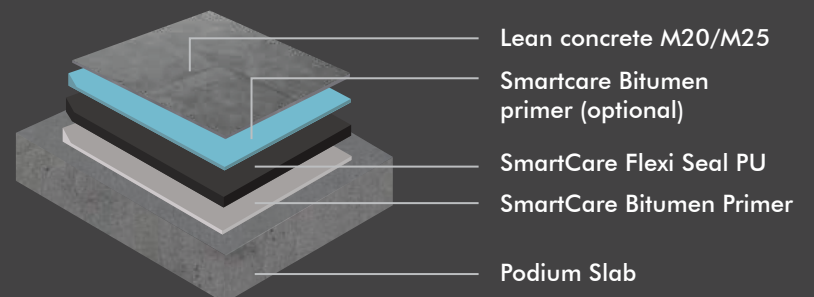
SmartCare Flexi Seal PU is a modified PU coating which cures by reaction with atmospheric moisture and forms a seamless highly elastic membrane for all below and above the grade waterproofing specifications. SmartCare Flexi Seal PU is designed with a high solid content which gives a high film build up and has a good adhesion to wide range of cementitious and masonry substrates. Due its liquid application nature it can be applied to all substrates which exhibit high detailing.

FEATURES & BENEFITS

- Superior durability and thermal stability
- Forms a seamless and tough waterproof barrier on curing
- Superior flexibility and elongation of up to 600%
- Superior crack bridging ability (CBA) up to 2mm
- Excellent adhesion to wide level of masonry and cementitious substrates
- Superior resistance to chemicals, mild acids and alkali, corrosive soil conditions, resistance against saline water and high sulphate resistance. Easy to apply coating by brush or spray

CHEMICAL & PHYSICAL PARAMETERS

- Colour: Black viscous liquid
- Packaging: 20 litre epoxy lacquered metal drums
- Shelf life: 9 months from the date of packaging
- Coverage: 1 litre / m² on a smooth flat surface will provide an adequate film thickness of approx. 1 mm



TECHNICAL PARAMETERS

PARAMETER	TEST METHODS	TYPICAL VALUES
Density, g/cm ³		1.24
Solid by Mass, %		85% Max
Application Limits ° C		5 – 60
Approximate Dry Time (20° C, 50% RH)		12 – 24 hrs. touch dry, 7 days full cure
Elongation %	ASTM D412	600%
Tensile Strength MN/m ² minimum	ASTM D412	2
Accelerated Weathering 12000hrs	ASTM G154	No appreciable deterioration
Hydrolysis Resistance		Excellent
Resistance to Industrial Environments		Good
Storage Stability in Unopened Container		6 months
Crack Bridging Ability	ASTM 836-84m	Result: 2.6mm (20° C, 0.4mm thick EMB)
Hardness (Shore 00/ A)	ASTM C836-05	90 / 50
Low Temperature Flexibility Crack Bridging		No cracking
Adhesion-in-Peel (mortar)		6.5 lb./in
Extensibility after Heat Aging		No cracking
Water Vapor Permeability *	ASTM E96-05	Result: 22.2 g/(m ² /24h)/1mm Hg

CERTIFICATIONS

STANDARD

Smithers London
Bureau Veritas Mumbai

TESTING LAB

Tensile testing, ASTM D412
ASTM D412, ASTM D2240, DIN 1048

SMARTCARE QUARTZ CRYSTALLINE ADMIX

SmartCare Quartz Crystalline Admix (integral crystalline waterproofing admix) is added to the concrete mix at the time of batching. SmartCare Quartz Crystalline Admix is composed of high quality cement, properly selected & graded inert aggregates, proprietary waterproofing active chemicals & additives. It is used as a chemically active waterproofing treatment for concrete. These active chemicals react with the moisture in fresh concrete with the by-products of cement hydration to cause a catalytic reaction, which generates a non-soluble crystalline formation throughout the pores and capillary tracts of the concrete. Thus, the concrete becomes permanently sealed against the penetration of water or liquids from any direction. It is effective against substances of high contact pH value.

FEATURES & BENEFITS

- Becomes an integral part of the concrete
- Permanent in nature
- Effective against hydrostatic pressure from either positive/negative surface of the concrete slab
- Less expensive than traditional methods
- Added to the concrete at the time of batching and therefore is not subject to climatic restraints
- Seals hairline cracks up to 0.4 mm
- Non - toxic in nature
- Resists chemical attack like chloride, sulfate etc.
- Allows concrete to breath

CHEMICAL & PHYSICAL PARAMETERS

- Colour: Off White
- Available Packs: 25 Kg
- Dosage: 0.75% of cement weight



TECHNICAL INFORMATION

- Appearance – Grey coloured free flowing powder
- Dosage – 0.75% of cement used
- Water reduction – Approx. 5% (checked in M 30 Mix Design)
- Workability – No change, as compared to control
- Setting time, initial & final – No change as compared to control
- Compressive strength, 28 days (ASTM C 109) – Min 5% increase over control
- Chloride (as Cl-) %, water soluble – 0.004
- Sulphate (as SO₄=) % water soluble – 0.082
- Water permeability, 28 days (DIN 1048- Part 5) – More than 30% reduction over control
- Rapid chloride Ion penetration, coulombs (ASTM C 1202) – 48% reduction over control
- Length change, 28 days – 0.01% over control

CERTIFICATIONS

STANDARD	DESCRIPTION	TESTING LAB
ASTM C 876-15	Bipolar Inhibition Mechanism	SETSCO
ASTM C 1202	Rapid Chloride Ion Penetration	SETSCO
DIN 1048	Water permeability of concrete	Veritas

SMARTCARE QUARTZ CRYSTALLINE COATING

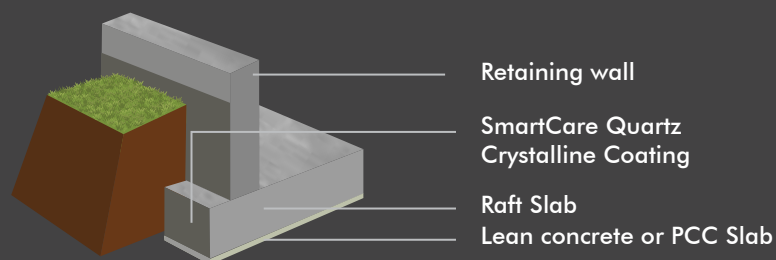
Asian Paints SmartCare Quartz Crystalline Coating is composed of high quality cement, properly selected & graded inert aggregates, proprietary waterproofing active chemicals & additives. It is used as a chemically active waterproofing treatment for concrete. SmartCare Quartz Crystalline Coating when mixed with water and applied as a brush coat to concrete, it penetrates deeply into the capillaries of the concrete to form billions of needles like crystal which blocks the pores, voids & micro cracks in concrete. It is effective against substances of high contact pH value

FEATURES & BENEFITS

- Becomes an integral part of the concrete
- Applied from either the positive or negative side
- Effective against hydrostatic pressure from either positive/negative surface of the concrete slab
- Easy to apply by brush
- Applicable over green concrete
- Seals hairline cracks up to 0.4 mm
- Non- toxic in nature
- Resists chemical attack like chloride, sulfate etc.
- Allows concrete to breath
- Penetrates deeply to seal capillary tracts and shrinkage cracks

CHEMICAL & PHYSICAL PARAMETERS

- Colour: Grey
- Available Packs: 25 Kg
- Dosage: 750 gm per sqm of powder i.e. 1050 gms of mixed material for one square meter area.
Mixing ratio – Powder (5 parts): Water (2 Parts)



TECHNICAL INFORMATION

- Appearance – Grey coloured free flowing powder
- Application – Brush or spray
- Mixing ratio – Powder (5 parts): Water (2 Parts)
- Hardening time – 24 hrs
- Coverage – 0.75 – 0.85 kg/sq. mtr for 2 coats (can be varied depending on surface condition)

CERTIFICATIONS

STANDARD	DESCRIPTION	TESTING LAB
ASTM C 876-15	Compressive Strength	SETSCO
ASTM C 1202	Rapid Chloride Ion Penetration	SETSCO
DIN 1048	Water permeability of concrete	Veritas
BS 6920	Suitable for Potable water	SETSCO