

جدول مقایسه تکنولوژی های مختلف ضد آب سازی

Property	Organic*	Acrylates	Inorganic silicates	Epoxy	Silicone	Silane / Siloxane Silxonane is filler, extnder	Silane	Zycosil
Molecular Structure	Monomeric compounds	Organic Polymers	Metal silicates, crystalline technology	Organic Polymers	Polydimethyl siloxane polymer	Low molecular weight siloxanes and Silane mixture	Alkylalkoxysilane	Organosilicon compound (Silane)
Particle size (nm)	0.5 – 1.5	100 – 1000	2 – 5	100 – 1000	50 -2000	Siloxane 100-500 Silane 3-5	2 – 4	3 – 6
Waterproofing Mechanism	Hydrophobation by organic film closing pores of the substrate		Reduction of water seepage due to formation of tighter packing	Hydrophobation by coating and closing pores of the substrate		Hydrophobation by changing surface property by reacting with surface and provide some penetration	Hydrophobation by changes surface property by chemical bonding with the polar groups of the substrate surface	
Durability	< 1 years	< 3 years	1 to 3 years	< 5 years	< 5 years	< 7 years	> 20 years	> 20 years
10 Years Abraison Test	Looses 99 % Protection	Looses 99 % Protection	Looses 99 % Protection	Looses 60 % protection	Looses 90 % protection	Looses 40 % Protection	Looses only 2% protection	Looses only 2% protection
UV stability	Not Stable	Not Stable	Stable	Not Stable	Not Stable	Some what Stable	stable	stable
Breathability / Vapor permeability	Not breathable/ non permeable	Not breathable / non permeable	Breathable (Permeable)	Not breathable / non permeable	Not breathable / non permeable	Some what breathable (some what permeable)	Breathable (permeable)	Breathable (permeable)
Depth of Penetration	1-3 cm	None	1-3 cm	None	None	Less than 0.5 mm	Up to 1 cm	1-3 mm
Fungus / Mildew protection	Poor	Poor	Poor	Poor	Good for 3-5 years	Good for 3-5 years	Excellent 10 + years	Excellent 10 + years
Acid and Alkaline Resistance (3- 9 pH)	Poor	Poor	poor	Poor	Good	Good	Excellent	Excellent
Solvent	None	Hydrocarbon / Water	Water	Hydrocarbon	Hydrocarbon	Hydrocarbon	None Alcohol	Water
Solvent Compatibility with Surface	Not Applicable	Not Compatibles	Compatible	Not Compatibles	Not Compatible	Not Compatible	Compatible	Compatible
Surface Requirements for effectiveness	Needs surface wetting	Needs smooth surface for good adhesion and continuous film	Newly constructed Porous surface	Needs smooth surface for good adhesion and continuous film	Needs smooth surface for good adhesion and continuous film	Need reactive groups (OH) on the surface	Need reactive groups (OH) on the surface	Need reactive groups (OH) on the surface
Micro Cracks	No	yes	No	yes	yes	yes	yes	yes
Products			Formula 7 (RADCON)		Protectosil 405, Surfapore R, Surfapore C	Protectosil 405 , IsoHydrosil Proofing	Protectosil 40 S	