

جدول مقایسه تکنولوژی های مختلف ضد آب سازی

Property	Siliconates	Silicone	Silane/Siloxane	Silane	ZYCOSIL
Molecular Structure	Na salt of Silicylic acid (Sodium silicate)	Polydimethyl silicone Silicone polymer	Mixture, methyltrimethoxy-silane polydimethylsilicone (silicone polymer)	Alkylalkoxysilane	Organo silicon Compound
Molecular size (M)	5	500 -2000	3-5 Silane 5 -50 Silicone	3-5	5-6
Mechanism of Waterproofing	Hydrophobation by silicate formation	Hydrophobation by coating and closing pores of the substrate	Hydrophobation by coating and closing pores of the substrate	Hydrophobation by chemical bonding with the polar groups of the substrate surface	Hydrophobation by chemical bonding with the polar groups of the substrate surface
Requirements	None	Need good adhesion and continuous film	Need good adhesion and continuous film	Need reactive groups (OH) on the surface	Need reactive groups (OH) on the surface
Solvent	Water	Hydrocarbon	Hydrocarbon	None Alcohol	Water
Solvent Compatibility with Surface	Compatible	Not Compatible	Not Compatible	Compatible	Very compatible
UV stability	Stable	Not Stable	Not Stable	Stable	Stable
Accelerated Abrasion test	Fails	Fails	Fails	Passes	Passes
Breath ability	Breathable	Not breathable	Not breathable	Breathable	Breathable
10 Years Stability test	Looses 99 % Protection	Looses 90 % protection	Looses 90 % Protection	Looses only 2% protection	Looses only 2% protection
Depth of Penetration	1-3 cm	None	0.2-0.5 CM	1-2 cm	1-2 cm
Vapor Permeability	Permeable	Not permeable	Not permeable	Permeable	Permeable
Alkaline Resistance	Poor	Poor	Poor	Excellent	Excellent
Resistance to Biological Growth	Poor	Poor	Poor	Excellent	Excellent
Structure Joint Protection	Protected	Completely Not protected	Completely Not protected	Completely Protected	Completely Protected
Printability of Substrate	Pintable	Not Pintable	Not Pintable	Pintable with good adhesion	Pintable with good adhesion
Corrosion Protection	Not Protected	Limited Protection	Limited Protection	Long term protection	Long term protection
Micro-crakes protection	Not Protected	Not Protected	Limited Protection	Long term protection	Long term protection
Durability	Less than 1 years	Less than 3 years	Less than 5 years	More than 20 years	More than 20 ears
Flammability	Non Flammable	Flammable	Flammable	Flammable	Non Flammable
Solvent Toxicity	Not Toxic	Toxic	Toxic	Toxic	Not Toxic
Solvent Safety	Safe for worker	Not safe for worker	Not safe for worker	Not safe for worker	Safe for Worker