



Global Innovator of Performance Chemicals and
Engineered Surfaces



Curative Waterproofing Sealers
based on PLIOLITE® / PLIOWAY® Resins

October 2015

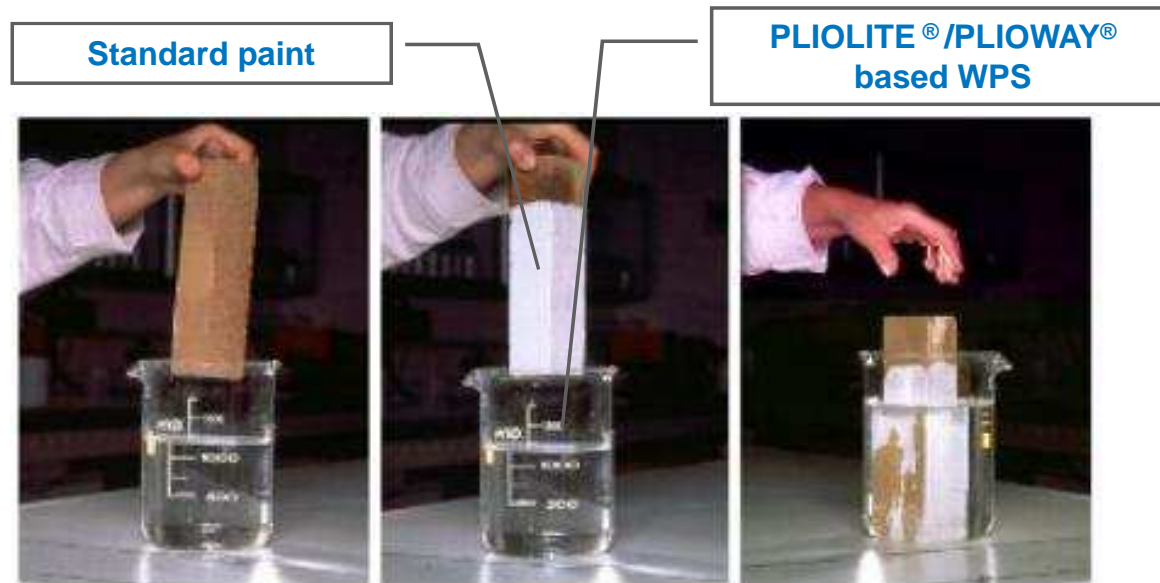
Water Proofing Sealer

Key points

- **Direct application with excellent adhesion on wet or porous surfaces**
- **Long term protection against water / humidity in the support**
-> Withstands 4 psi hydrostatic pressure (ASTM D7088-04)
- **Excellent resistance to efflorescence**
- **Inhibition of fungal & algal growth**
- **Low or no odor (if based on Plioway or Plioway Ultra resins)**
- **Easy to apply**
- **Fast dry / Easily recoatable**
- **Easy renovation**
-> Efficient and permanent solution to humidity problems in cellars & basements

Adhesion on Porous Wet Substrates

- WPS based on PLIOLITE® / PLIOWAY® resins contain Portland cement which provides outstanding penetration and adhesion to wet surfaces



Damp brick
(immersed 24hr)

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Hydrostatic Pressure Test

ASTM D7088-04 (Standard practice for resistance to hydrostatic pressure for coatings used in below grade applications applied to masonry)

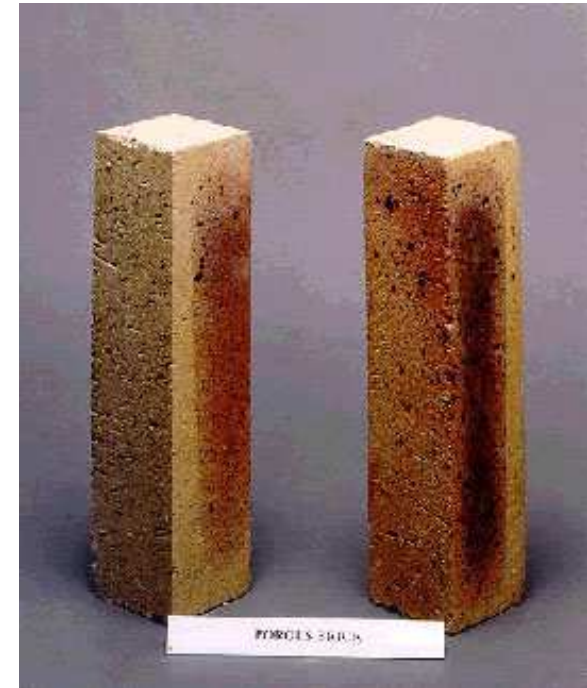
- **Concrete block coated with a waterproofing sealer, filled-up with water and pressurized @ 4 Psi (0.28 kg/cm²)**
- **PLIOLITE® / PLIOWAY® resin based waterproofing sealer exhibits no blisters, no loss of adhesion, no softening or discoloration**



Efflorescence Resistance

Test method

- **Dry brick:**
2 coats of sealer (brush) allowed to dry 24 hours
- **Wet brick (immersed 24 hrs in water):**
1 coat applied directly on damp substrate.
2nd coat 24 hours later.
- **Unpainted bottom of the bricks immersed in water saturated with salt**



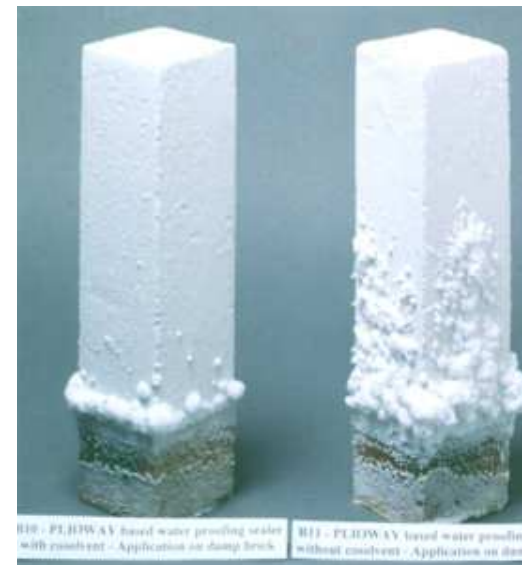
Efflorescence Resistance

Role of surfactant (Duomeen TDO)

- Surfactant improves applicability on damp surfaces by displacing water, hence improves paint penetration & film formation



WPS with (left) / without (right) surfactant
dry brick



WPS with (left) / without (right) surfactant
wet brick

Efflorescence Resistance

Comparison with water based systems

- Water based paints have poor efflorescence resistance on dry or wet walls
- **PLIOLITE® / PLIOWAY® resin based WPS has excellent water and efflorescence resistance even under extreme conditions**



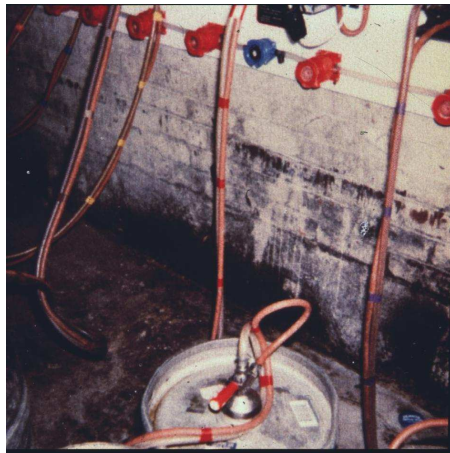
WPS PLIOWAY / WB WPS
dry brick



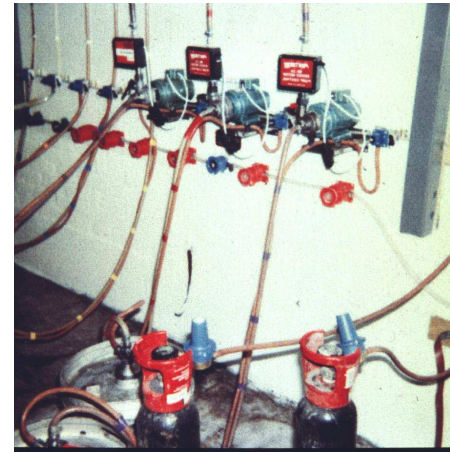
WPS PLIOWAY / WB WPS
wet brick

Mildew Resistance

- **Micro-organisms require temperature, humidity & nutrients to grow**
Solvent based paints are potentially more resistant
- **The cement inhibits fungal & algal growth**



Cellar



Cellar after 1 year

Starting Formulation based on PLIOLITE® resins

WATER PROOFING SEALER (SMOOTH FINISH)

250 – 300 g/m² per coat by brush or roller

IMC 07 A5

	Weight, %	Suppliers
Solvesso 100	9.60	Exxon Mobil Chemical
Exxsol D40	3.00	Exxon Mobil Chemical
Duomeen TDO	0.50	Akzo Nobel Chemicals
PLIOLITE AC80	6.60	OMNOVA SOLUTIONS
PLIOLITE AC5-G	2.20	OMNOVA SOLUTIONS
<i>Mix under high shear until dissolved, then add</i>		
Exxsol D40	5.00	Exxon Mobil Chemical
Tioxide TR92	9.20	Huntsman Pigments Division
Durcal 10	25.90	Omya
White Portland Cement	27.80	Local supply
<i>Mix under high shear until well dispersed, then add</i>		
Cereclor M50	3.80	Ineos Chlor
Exxsol D40	6.40	Exxon Mobil Chemical
Total	100.00	

PVC	63.2%	Specific Gravity	1.57
Volume Solids	51.4%	VOC (EU)	377 g/L
Weight Solids	76.0%		

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Starting Formulation based on PLIOWAY[®] resins

LOW ODOUR WATER PROOFING SEALER (SMOOTH FINISH)

250 – 300 g/m² per coat by brush or roller

IPLW 03 C5

	Weight, %	Suppliers
Exxsol D40	15.00	Exxon Mobil Chemical
Duomeen TDO	0.51	Akzo Nobel
PLIOWAY EC1	8.93	OMNOVA SOLUTIONS
PLIOWAY EC-T	2.21	OMNOVA SOLUTIONS
<i>Mix under high shear until dissolved, then add</i>		
Exxsol D40	5.00	Exxon Mobil Chemical
Tioxide TR92	9.34	Huntsman Pigments Division
White Portland Cement	28.18	Local supplier
Durcal 10	26.28	Omya
<i>Mix under high shear until well dispersed, then add</i>		
Optifilm Enhancer 300	1.65	Eastman Chemical
Exxsol D40	2.90	Exxon Mobil Chemical
Total	100.00	

PVC	61.6%	Specific Gravity	1.56
Volume Solids	53.5%	VOC (EU)	356 g/L
Weight Solids	77.1%		

