



**GE-NANO CLEARSEAL:** Is a Nano Silanised Polymer sealant providing a 'Clear Seal' option with additional benefits. Due to the combination of particle sizes used, a **water-resistant** and **high penetrative protective** layer is achieved. The application is quick drying (+/- 1 hour) with 'NO' Tyre pick-up or contamination of vehicles and NO repainting of road markings required.

This 'New Age' modification of surfacing materials can substantially improve a road's structural characteristics. For example, binders can be modified to, inter alia, have a higher resistance to 'ageing' (Oxidation of volatiles, which results in brittleness of the binders and cracking) under the harsh environmental conditions experienced on the continent.

Furthermore, New-Age Modifiers increase the "maintenance free' life of the surfacing and provide user friendly materials ideally suited for maintenance activities, resurfacing and surfaces of new roads. Since they are placed at 'Ambient' temperatures, considerable savings in energy input are realised.

The placement of surfacing's at ambient temperatures also makes NME ideally suited for 'Labour Intensive' construction and maintenance activities. Workers can safely work with the materials, which are modified to adhere to stone/ gravel / sand. The modified binder is much less likely to contaminate equipment or adhere to exposed skin.

Can be easily applied with Hand Sprayers or via a Water Cart, with little training required. This sealant is also ideally suited for the priming of an exposed base, protecting the base layer against water damage and vehicle trafficking.

Gravel Road treated with Ge-NANO CLEARSEAL  
A - Treated with CLEARLSEAL B - Not treated



For a 'Gravel Road' a double application of this seal can be applied to protect the gravel layer. It provides a surface with a 'Natural' Aesthetically pleasing look while protecting the layer from water damage, achieving a high depth of penetration on an existing compacted layer.

Note: The above Silanised modification can also be incorporated into an "Anionic bitumen' emulsion, should this be specified.

<b>WATER PERMEABILITY - MARVIL TEST - UNIVERSITY OF PRETORIA</b>			
<b>PROJECT Name/CONTRACT No :</b>	<b>University of Pretoria</b>		
<b>SAMPLE CONTAINER</b>	Clients Bags	Clients Bags	Clients Bags
<b>TEST POSITION (CH)</b>	1	2	3
<b>ROAD NAME</b>	<b>ACCESS ROAD - ENGINEERING 4.0</b>		
<b>LAYER</b>	G1 Base	G1 Base	G1 Base
<b>LAYER CONDITION</b>	Good	Good-undisturbed	Good-driven over
<b>TREATED/UNTREATED</b>	NON-TREATED	CLEAR-SIL @ 2l/m <sup>2</sup>	CLEAR-SIL @ 2l/m <sup>2</sup>
<b>CLIENT MARKINGS</b>	None	None	None
<b>MATERIAL DESCRIPTION</b>	Compacted G1	Compacted G1	Compacted G1
<b>FIELD MOISTURE CONTENT</b>	Not Recorded	Not Recorded	Not Recorded
<b>DATE APPLIED</b>	<b>21-08-20</b>	<b>21-08-20</b>	<b>21-08-20</b>
<b>DATE TESTED</b>	<b>20-05-21</b>	<b>20-05-21</b>	<b>20-05-21</b>
	<b>PERMEABILITY @ 50ml</b>		
Binding Agent Content	NON-TREATED	CLEAR-SIL @ 2l/m <sup>2</sup>	CLEAR-SIL @ 2l/m <sup>2</sup>
GPS coordinates	N/A	N/A	N/A
Time recorded @ 50ml	08' 01".29	1° 25' 43".56	51' 00".17
Time recorded in seconds	481	5143	3060
Permeability (litre per hour)	0.370	0.035	0.059
Comment			
	<b>PERMEABILITY @ 100ml</b>		
Binding Agent Content	NON-TREATED	CLEAR-SIL @ 2l/m <sup>2</sup>	CLEAR-SIL @ 2l/m <sup>2</sup>
GPS coordinates	N/A	N/A	N/A
Time recorded @ 50ml	23' 10".14	-	-
Time recorded in seconds	1390	-	-
Permeability (litre per hour)	0.260	-	-
Comment			
	<b>PERMEABILITY @ 150ml</b>		
Binding Agent Content	NON-TREATED	CLEAR-SIL @ 2l/m <sup>2</sup>	CLEAR-SIL @ 2l/m <sup>2</sup>
GPS coordinates	N/A	N/A	N/A
Time recorded @ 50ml	43' 33".14	-	-
Time recorded in seconds	2613	-	-
Permeability (litre per hour)	0.207	-	-
Comment			
<b>DIFFERENT INTERVALS</b>	<b>PERMEABILITY @ 75ml</b>	<b>PERMEABILITY @ 20ml</b>	<b>PERMEABILITY @ 25ml</b>
Binding Agent Content	NON-TREATED	CLEAR-SIL @ 2l/m <sup>2</sup>	CLEAR-SIL @ 2l/m <sup>2</sup>
GPS coordinates	N/A	N/A	N/A
Time recorded @ 50ml	16' 08".04	49' 03".28	24' 08".55
Time recorded in seconds	968	2943	1448
Permeability (litre per hour)	0.280	0.024	0.062
<b>Average Permeability</b>	<b>0.279 l/h</b>	<b>0.030 l/h</b>	<b>0.061 l/h</b>
Stopped after	1 hour	1 hour 30 min	1 hour
Tested By:	Thomas & Stephen	Thomas & Stephen	Thomas & Stephen
* Tested According To	SANS 3001-BT12:2012	SANS 3001-BT12:2012	SANS 3001-BT12:2012
Temp. 'C (On site)	23°	23°	23°
Environmental Conditions	Ambient	Ambient	Ambient

For more information please contact us at the following details :

GeoNano Technologies (Pty) Ltd / 18D Davies Road; Wychwood; Germiston; 1401 / Tel : +27 11 764 1996 / E-mail : info@geonano.co.za