



TEST REPORT

1. NO : CT19-134181E
2. Client
 - Name : NOROO Paint & Coatings Co.,Ltd.
 - Address : 351, Bakdal-ro, Manan-gu, Anyang-si, Gyeonggi-do, 13977, Korea
3. Date of Test : 2019.11.29 ~ 2020.02.03
4. Use of Report : Quality control
5. Test Sample : PROTECH NP-200
6. Test Method
 - (1) KS F 4922:2007



Affirmation	Tested By		Technical Manager	
	Name : HONG SUNG ROG		Name : Shin, Hong Chul	

This report is not accredited by KOLAS.
 Our report apply only to the standards or procedures identified and to the sample(s) tested unless otherwise specified. The test results are not indicative of representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products. The results of using only a portion of this report cannot be guaranteed. The authenticity of this test report can be checked on KCL website(www.kcl.re.kr).

2020.02.03

Korea Conformity Laboratories President Yoon, Kap Seok *Yoon, Kap Seok*

Result Inquiry : 73, Yangcheong 3-gil, 0chang-eup, Cheongwon-Gu, Cheongju-Si, Chungbuk, Korea (82-43-210-8948)



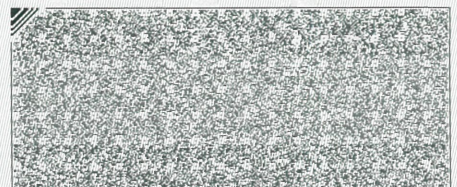
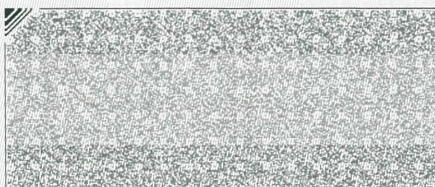
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7. Test Results

1) PROTECH NP-200

Test Item(s)	Unit	Test Method	Test Results	Remark	Loc.
Coating workability	-	(1)	Pass		
Outer shape	-	(1)	Pass		
Dry to touch	s	(1)	26		
Tensile performance - Tensile strength	N/mm ²	(1)	20		
Tensile performance - Elongation rate of rupture	%	(1)	493		
Tear performance - Tear strength	N/mm	(1)	110		
Temperature dependency - Tensile strength ratio(-20 °C)	%	(1)	160		
Temperature dependency - Tensile strength ratio(60 °C)	%	(1)	85		
Temperature dependency - Elongation rate between grips at rupture(-20 °C)	%	(1)	108		
Temperature dependency - Elongation rate between grips at rupture(20 °C)	%	(1)	255		
Temperature dependency - Elongation rate between grips at rupture(60 °C)	%	(1)	236		
Heating elongation and shrinkage state - Elongation and shrinkage rate	%	(1)	-0.6		
Tensile performance after deterioration treatment -Tensile strength ratio -Heat treatment	%	(1)	85	(20 ± 2) °C (65 ± 20) % R.H.	A
Tensile performance after deterioration treatment -Elongation rate at rupture -Heat treatment	%	(1)	392		
Tensile performance after deterioration treatment -Tensile strength ratio -Accelerated exposure treatment	%	(1)	92		
Tensile performance after deterioration treatment -Elongation rate at rupture -Accelerated exposure treatment	%	(1)	443		
Tensile performance after deterioration treatment -Tensile strength ratio -Alkali treatment	%	(1)	96		
Tensile performance after deterioration treatment -Elongation rate at rupture -Alkali treatment	%	(1)	474		
Tensile performance after deterioration treatment -Tensile strength ratio -Acid treatment	%	(1)	98		



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Tensile performance after deterioration treatment -Elongation rate at rupture -Acid treatment	%	(1)	475	(20 ± 2) °C (65 ± 20) % R.H.	A
Tensile performance after deterioration treatment -Tensile strength ratio -Sodium chloride treatment	%	(1)	99		
Tensile performance after deterioration treatment -Elongation rate at rupture -Sodium chloride treatment	%	(1)	444		
Deterioration state at elongation -Heat treatment	-	(1)	Pass		
Deterioration state at elongation -Ozone treatment	-	(1)	Pass		
Deterioration state at elongation -Accelerated exposure treatment	-	(1)	Pass		
Bond strength -None treatment	N/mm ²	(1)	2.1		
Bond strength -State of membrane coating -Warm Cold Repetition treatment	-	(1)	Pass		
Fatigue Resistance	-	(1)	Pass		

※ The above is the result of test specimen provided by the applicant.

※ Location

A : 73, Yangcheong 3-gil, Ochang-eup, Cheongwon-Gu, Cheongju-Si, Chungbuk, Korea

----- End of Report -----

