

REPORT

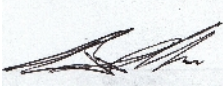
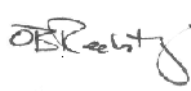
CPT2760

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TITLE	UV testing of materials exposed to sunlight SANS 151	
AUTHOR	NAME	SIGNATURE
	S. Botha	
	DATE	02/12/2013
DATE OF ISSUE	02/12/2013	
NUMBER OF PAGES	7	
ISSUING ORGANISATION		
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CONTRACT NAME	S4239	
PROJECT NUMBER	CPT2760	
ISSUE NUMBER	1	
COPY NUMBER	1	
APPROVED BY		
RESPONSIBILITY	NAME	SIGNATURE
Technical Director	O. B. Reeksting	
DISTRIBUTION		
COMPANY	REPRESENTATIVE	COPY NUMBER
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INTRODUCTION

Centre for Polymer Technology (Pty) Ltd were approached by Andrew Enslin from Han-Cock Trading and Projects to test the LNB Protector which is exposed to sunlight.

SAMPLE INSPECTION



Figure 1 – LNB Protector

TESTS CONDUCTED

Impact at 23°C before and after UV weathering

UV stability of part (ASTM G154)

METHOD OF TEST

Impact Resistance

A steel rod striker with a 6.5mm radius tip was used to impact the sample before and after UV exposure at 23°C. The impact energy was 7.5Joule and the energy was calculated by multiplying the height of the fall (in meters) and the weight (in kilograms) of the striker used.

UV durability ASTM G154

Test specimens were mounted with the test surface facing the UV lamps. QUV equipment was used to conduct testing for 240 hours using a cycle of 4hour UV exposure at 60°C and 4hour condensation exposure at 50°C.

RESULTS

Impact Resistance

SAMPLE	TEST METHOD	RESULT
Before UV aging	7.5J impact was performed on the outer tank at room temperature. Impact was performed before and after UV aging of 240hours. The samples were evaluated for cracks and surface damage	no surface cracks nor breaking of part
After UV aging		no surface cracks nor breaking of part

UV Stability

SAMPLE	TEST METHOD	RESULT
LNB Protector	ASTM G154 for 240hours.	No colour changes, or dimensional changes (shrinkage) occurred after the accelerated weathering.

DISCUSSION OF RESULTS

UV weathering the part under the conditions of ASTM G154 at 240 hours did not show any signs of discolouration, breaking or cracking when impacted. Refer to figures 2 and 3.

ANNEXURE

Figure 2 – Visual appearance before and after UV

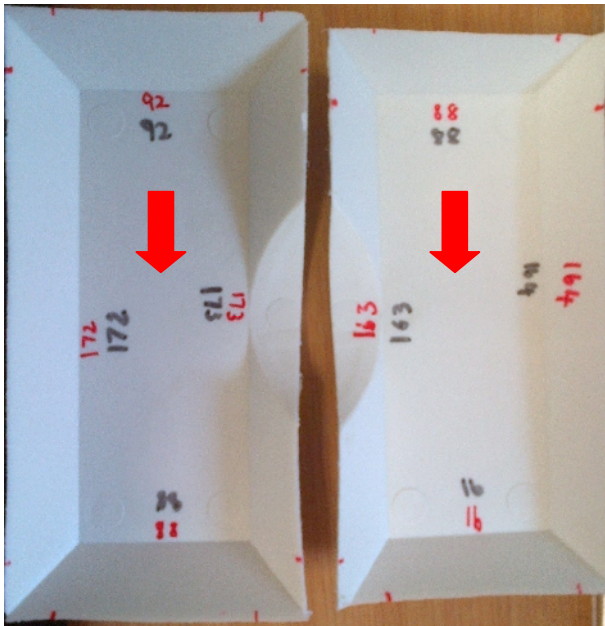


Figure 3 – Dimensions before and after UV