



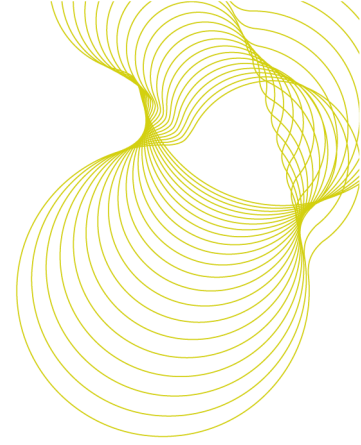
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**Testing of Three Ply
Floor Protection Product
– Tensile and Tear
Strength**

Prepared for:
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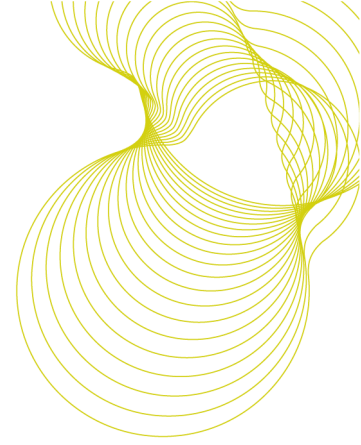
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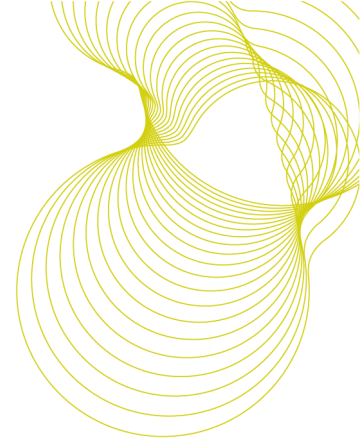
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1 Introduction

At the request of Mr Khadar Akkawi of the Dubai Central Laboratory, acting on behalf of Mr Maged Elias, Best Choice Floors Protection Manufacturing LLC, BRE have undertaken tensile and tear resistance strength tests on the floor protection product supplied by Best Choice Floors Protection Manufacturing LLC.

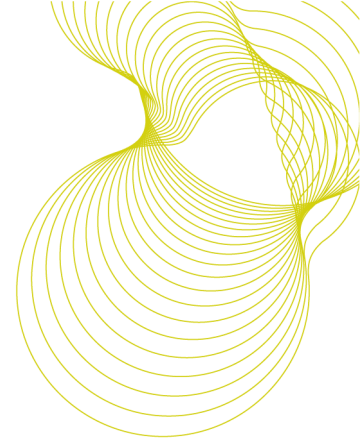
The product was a three ply hard sheet roll. The plies were composed of a corrugated paper layer covered by a flat hard paper adhered to a polyethylene facing layer.

Details of the samples received are shown in Table 1, with test details given in Section 2.

Sample Reference	Description	Date Received
259348/01	Three Ply Floor Protection Product	10/03/2010 and 13/04/2010
259348/02	Three Ply Floor Protection Product	24/04/2010

Table 1. Details of samples received

This report contains a factual account of the testing undertaken.



2 Details of tests carried out

2.1 Tear Resistance

Tear resistance was first attempted following the requested method, ie that detailed in BS EN 21974 – Paper, determination of tearing resistance, Elmendorf method.. When testing was attempted, the material was found to be too thick for the apparatus so an alternative tear resistance test was proposed.

With agreement from the client, the tear resistance was carried out following the method given in BS EN 12310-2 - Flexible sheets for waterproofing – determination of tear resistance– plastics and rubber sheets for roof waterproofing. The samples were taken in accordance with BS EN 13416 and cut following the method detailed in Part 7, BS EN 12310-2. The nature of the test arrangement is shown in Figure 1 below.

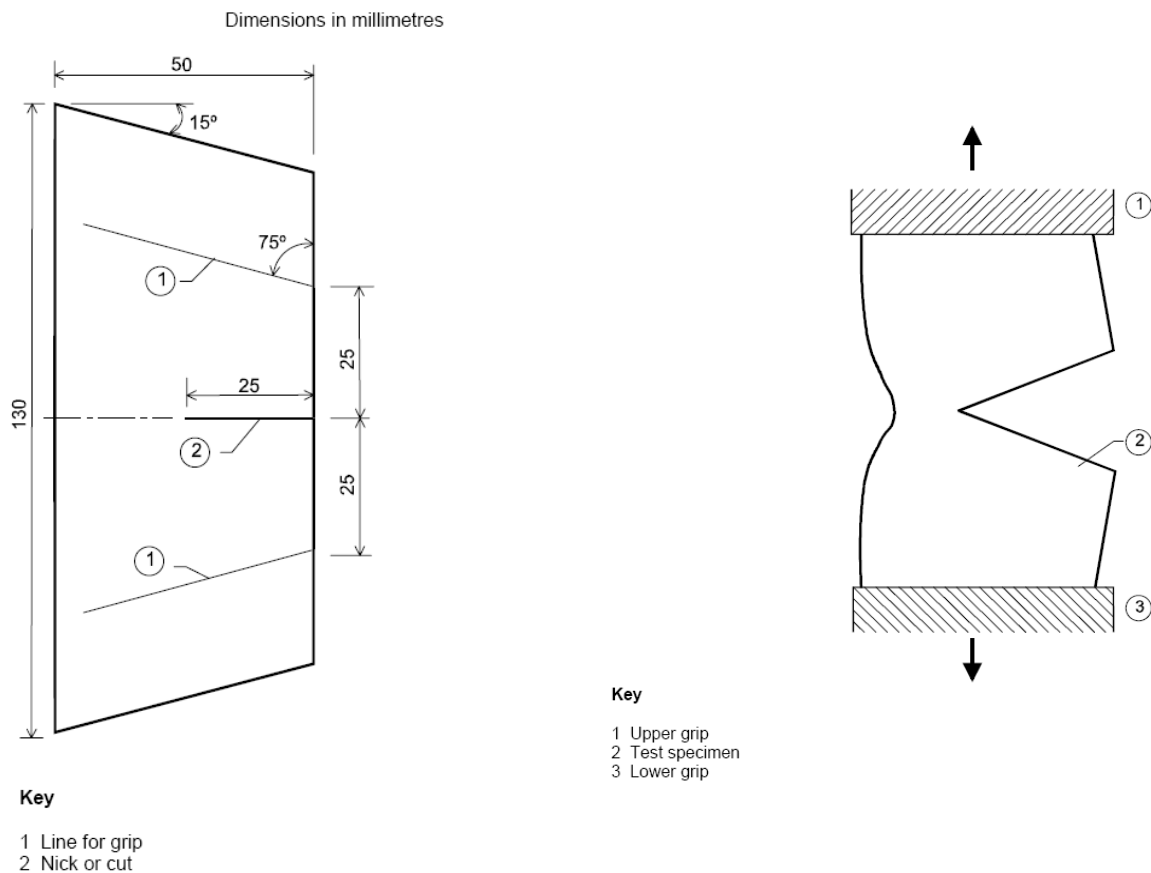
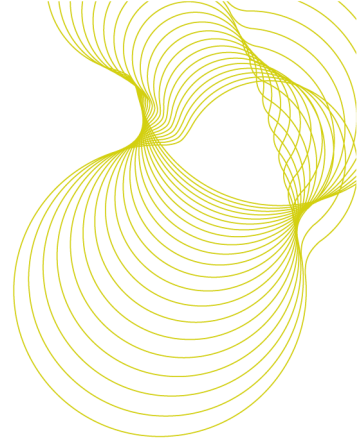
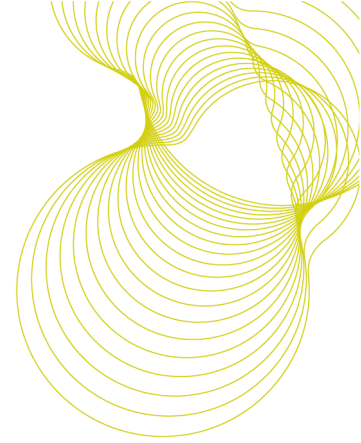


Figure 1. Diagrams showing the dimensions of the test specimens as-cut, and the test arrangement



2.2 Tensile Strength

Tensile strength was carried out following the method given in BS EN 12311-2 – Flexible sheets for waterproofing – Determination of tensile properties plastics and rubber sheets for roof waterproofing, using rectangular specimens measuring 200 mm x 50 mm.



3 Test results

3.1 Tear Resistance

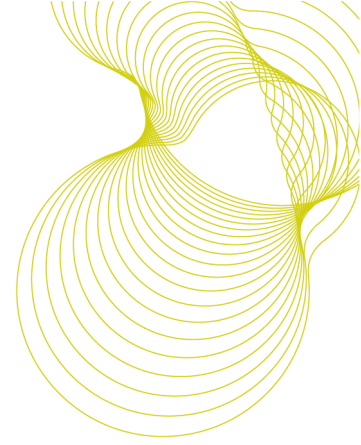
The tear resistance test was carried out on 07/06/10 with the results summarised in Tables 2 and 3 below.

Specimen reference	Maximum tensile force (N)
259348/02/1	34.48
259348/02/2	34.28
259348/02/3	32.6
259348/02/4	33.8
259348/02/5	39
Mean	34.8

Table 2. Tear resistance with corrugations perpendicular to long axis of sample

Specimen reference	Maximum tensile force (N)
259348/02/6	29.52
259348/02/7	26.12
259348/02/8	25.68
259348/02/9	30.16
259348/02/10	25.04
Mean	27.3

Table 3. Tear resistance with corrugations parallel to long axis of sample



3.2 Tensile Strength

The tear resistance testing was carried out on 06/06/10, with the results summarised in Tables 4 and 5 below.

Specimen reference	Maximum tensile force (N)	Elongation at max. force (%)
259348/02/11	410.5	4.33
259348/02/12	407.5	3.63
259348/02/13	399.2	3.27
259348/02/14	390.4	2.88
259348/02/15	390.4	2.88
Mean	399.6	3.4

Table 4. Tensile strength with corrugations perpendicular to long axis of sample

Specimen reference	Maximum tensile force (N)	Elongation at max. force (%)
259348/02/16	364.4	2.93
259348/02/17	372.8	4.8
259348/02/18	365.6	5.6
259348/02/19	380	3.79
259348/02/20	380	4.44
Mean	372.6	4.3

Table 5. Tensile strength with corrugations parallel to long axis of sample

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