

## Laboratory Report AP-0104/1

### Assessment of Resistance to Wear of

### *Rubber Material (for use as impact attenuating playground surfacing)*

**Summary:** An assessment of Resistance to Wear property has been carried out on *Rubber Material (for use as impact attenuating playground surfacing)* surfacing supplied by OctoCert Certification Services EE following the method described in BS 7188:1998 +A2:2009 “*Methods of Testing Impact Absorbing Playground Surfacing – Performance requirements and test methods*”.

**Reported by:**



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Operations Manager

**Date of this report:**

28<sup>th</sup> January 2019

Tests marked \* are outside the scope of our accreditation under UKAS



## CONTENTS

1	Introduction.....	3
2	Samples .....	3-4
3	Test Procedures.....	5
	3.1 Resistance to Abrasive Wear* .....	5
	3.2 Weight per unit Area* .....	5
	3.3 Thickness* .....	5
4	Results .....	6
5	Conclusions.....	7

## 1 INTRODUCTION

**1.1** Acting under instructions from Zolotas Georgios of OctoCert Certification Services EE, testing was carried out on *Rubber Material (for use as impact attenuating playground surfacing)* surfacing following method described in BS7188:1998 + A2:2009 “*Methods of Testing Impact Absorbing Playground Surfacing – Performance requirements and test methods*”.

**1.2** The sample was tested for Resistance to abrasion only.

**1.3** Samples were supplied by:

OctoCert Certification Services EE  
150, L.Papanikolaou str.  
Pefka 57010  
Greece

and manufactured by:

Gommatechnika,  
8th Km, Varis  
Koropiou,  
Koropi  
Greece

**1.4** The methods of test employed are described and the results obtained are shown. These results relate only to the samples submitted for test.

## 2 SAMPLE DETAILS

**2.1** 1 sample of *Rubber Material (for use as impact attenuating playground surfacing)* surfacing was received on 17<sup>th</sup> January 2019. The samples measured 500 x 500mm in plan.

- 2.2** *Rubber Material (for use as impact attenuating playground surfacing)* comprised two layers. The top layer was formed of resin-bound, red SBR granules, 6.85mm thick. The bottom layer was formed of resin-bound, black rubber crumb with a thickness of 24.27m, giving an overall measured thickness of 31.12mm. The back of the sample was moulded in a square pattern, 10mm height.



**Top surface**



**Side view**



**Back side**

- 2.3** The sample was not identified by trademark.

### **3 TEST PROGRAMME**

The property tested was *Resistance to Wear* which was assessed using the method described in BS 7188: 1998 +A2:2009 “*Methods of Testing Impact Absorbing Playground Surfacing – Performance requirements and test methods*”:

#### **3.1 Resistance to Abrasive Wear \***

This test utilises the Taber Abraser apparatus fitted with Type H18 wheels, each operating under a load of 4.9N. The results reported are the Wear Index, which is the greatest of the incremental weight losses recorded during the course of the test, and the Wear Ratio, which is the ratio of the first weight loss recorded to that of the fifth weight loss recorded.

The requirements of BS 7188: 1998 + A2:2009 paragraph 4.1 are that for each of the specimens tested, before and after the various ageing conditions specified, the Wear Index should be less than 1.0 and the Wear Ratio should be not less than 1.0 and not more than 3.0. A value outside this range implies that the material could change its behavior significantly once the surface coating had abraded away.

#### **3.2 Weight per Unit Area\***

The sample submitted for test is weighed using a ‘0.5’ grade electronic load-cell

#### **3.3 Thickness\***

Thickness of the sample submitted for test is measured using calibrated calipers.

## 4 RESULTS

### 4.1 Resistance to Abrasive Wear\*:

	Units	Accuracy (±)	As received	Performance requirements
<b>Wear Index</b>	g	<b>0.02g/1000 revs</b>	<b>0.27</b>	<b>&lt;1</b>
<b>Wear Ratio</b>	-	-	<b>1.69</b>	<b>1 - 3</b>

### 4.2 Thickness and Weight per Unit Area\*:

WPUA (kg/m <sup>2</sup> ± 0.02)	Thickness (mm ± 0.02)		
	Top layer	Bottom layer	Overall
28.24	6.85	24.27	31.12

**Comments:**

*These values are reported as an aid to identification. No requirements for these properties are specified.*

## **5 CONCLUSIONS**

When tested to BS 7188: 1998+A2:2009, *Rubber Material (for use as impact attenuating playground surfacing)* surfacing meets the requirements for Resistance to Abrasive Wear\*.

Results relate to the sample submitted for test.

**END OF REPORT**