

# Test Report

Type testing report according to DIN V 18032-2:2001-04

Client: Porplastic  
Sportbau von Cramm GmbH & Co. KG  
Hohenneuffenstraße 14  
72622 Nürtingen  
Germany

Order-No. (Client):

Order-No. (MPA): **901 7127 000-54 /Kf/Whr**

Test Item: **Point-elastic sports floor  
"PORPLASTIC PEL master 12+2 RF"**

Specification Applied: DIN V 18032-2:2001-04

Date of Receipt of Test Item 05-07-2009

Date of Test: beginning 05-12-2009

Date of Report: 07-29-2009

Page 1 of 4 text pages

Enclosures : 1

Supplements:

Total Number of Pages: 5

Number of Reports: 2 x Porplastic (1 Original, 1 copy)

The test results relate only to the items tested.

Publication of this report in full or partly is only allowed with written authorization by MPA University of Stuttgart.

## **1 Purpose of investigation**

We have been commissioned by Porplastic Sportbau von Cramm GmbH & Co. KG, Nürtingen, to test the point-elastic sports floor "**PORPLASTIC PEL master 12+2 RF**" according to DIN V 18032-2:2001-04.

For the tests on 05-07-2009 we got a sample with the following dimensions 1,0 m x 1,0 m with a T-joint in the elastic layer.

Testing date: beginning 05-12-2009

## **2 Construction of the sports floor**

<b>Top layer</b>	approx. 2,0 mm PUR-coating material with PUR-sealing approx. 0,5 mm fabric
<b>Elastic layer</b>	approx. 12,0 mm PUR-bound rubber granules/fibres with cell-rubber particles
	bulk density <sup>1)</sup> : approx. 400 kg/m <sup>3</sup>
	compression modulus <sup>2)</sup> : approx. 0,16 N/mm <sup>2</sup>

## **3 Testing procedure**

The test were carried out according DIN V 18032-2:2001-04

The procedures applied which are accredited according to DIN EN ISO/IEC 17025:2005 (DAR-registration-no. DAP-PL-2907.07) are signed with <sup>®</sup>.

Testing conditions: 23-50-2 according to DIN 50014 (if otherwise not stated).

System testing spot 1 was placed over a T-joint of the elastic layer, system testing spot 2 over a length joint of the elastic layer and system testing spot 3 over a face joint of the elastic layer. The other testing spots 4 and 5 were placed in the area.

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<sup>1)</sup> Determined according to DIN 53 420

<sup>2)</sup> Determined in accordance with DIN 53 577 (compression 20 %, testing speed 2 x thickness of the elastic layer in mm/min))

#### 4 Test results

In the following table the min. and max. values of the test results are summarized and as a comparison the requirements in DIN V 18032-2:2001-04 are tabulated.

The individual test results are tabulated in the enclosure 1

**Table 1: Test results (average) and comparison with the requirements of  
DIN V 18032-2:2001-04**

Tests according to DIN V 18 032-2:2001-04		Test results		Requirements according to DIN V 18 032-2:2001-04
		min. value	max. value	
Force reduction	FR <sub>55</sub>	48 %	---	category 1: min. 51 % category 2: min. 45 %
Vertical deformation	VD	--	2,2 mm	category 1: max. 3,5 mm category 2: max. 3,0 mm
Thickness factor	TF	5,5	---	min. 4,0
Area deflection w <sub>100</sub>	--	0 %	0 %	max. single value: 0 %
	--	0 %	0 %	
	--	0 %	0 %	
	--	0 %	0 %	
Behaviour under a rolling load - axle load without damage - BRL		1000 N	--	1000 N
Impact resistance at 10 °C	IR	14 Nm	--	min. 8 Nm
Residual impression	RE	--	0,34 mm	max. 0,5 mm
Ball rebound	BR	97 %	--	min. 90 %
Sliding properties <sup>1)</sup>	SP	0,42	0,47	min. 0,4; max. 0,6

<sup>1)</sup> new, not treated with any cleaning materials

## 5 Evaluation<sup>1</sup>

The basis for the evaluation are the requirements of DIN V 18 032-2:2001-04.

These requirements are fulfilled by the tested point-elastic sports floor „PORPLASTIC PEL master 12+2 RF“ regarding category 2.

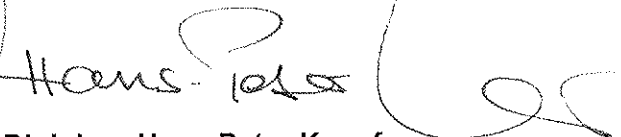
Prepared by



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Tester



Approved and released by



Dipl.-Ing. Hans-Peter Knauf  
Section leader „Sports floors, sports facilities“

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<sup>1</sup> opinions und interpretations are not part of the accreditation

**Table 2: Individual test results**

Test			System testing spot				
			1	2	3	4	5
Force reduction	FR <sub>22</sub>	%	48	48	49	49	49
	FR <sub>55</sub>	%	--	--	--	--	--
	FR <sub>88</sub>	%	--	--	--	--	--
Vertical deformation	VD	mm	2,1	2,1	2,2	2,2	2,1
Thickness factor	TH	-	5,7	5,7	5,5	5,5	5,7
area deflection	W <sub>100I</sub>	%	0	0	0	0	0
	W <sub>100II</sub>	%	0	0	0	0	0
	W <sub>100III</sub>	%	0	0	0	0	0
	W <sub>100IV</sub>	%	0	0	0	0	0
Behaviour under a rolling load - axle load without damage -			1000				
Impact resistance							
at 10 °C	SF <sub>new</sub>	Nm	15	15	16	16	16
	SF <sub>old</sub>	Nm	14	14	15	14	15
at 15 °C	SF <sub>new</sub>	Nm	16	16	17	17	17
at 23 °C	SF <sub>new</sub>	Nm	17	18	18	18	18
Residual impression	RI	mm	0,31	0,34	0,32	0,34	0,32
Ball rebound	BR	%	97	98	97	97	97
Sliding properties	SP	-	0,42	0,45	0,44	0,47	0,43

