

Test report no. 214719

English version

1st copy of 27 October 2021

Principal: Secil Kautschuk Deutschland
Am Güterbahnhof 4
65510 Idstein
GERMANY

Date of commission: 23 August 2021 / Ulrike Scotland

Subject of commission: Tests on highway joint profile according to EN 14188-3

Product: "F-08" by Secil

The test report contains 4 pages.

The testing material is used up.



Remark: This test report is the English version of original German version of 25 October 2021.

In case of any dispute the German version is decisive. The test report shall be published unabridged. Any partial publishing requires written allowance by the testing institute. The test results refer only to the tested material.

1. General

The principal assigned MPA HANNOVER with tests according to EN 14188-3 at the highway joint profile "F-08" by Secil.

2. Delivery of samples

The following samples were delivered to MPA HANNOVER on 8 September 2021:

- 2 pc. rubber sheets (C06 TEST PLATES), l = 200 x 200 mm, thickness appr. 2 mm (sample no. 1)
- 1 pc. highway joint profile „F-08“ (C06 PRODUCT), length appr. 2 m (sample no. 2)

According to the principal the highway joint profile and the rubber sheets were made out of the same batch. This test report states the results of tests on sample no. 1 and sample no. 2.

3. Scope

The tests were performed according to EN 14188-3:2006. For the initial tests results refer to "Prüfbericht Nr. 081744-Hv". The following tests were performed:

Limit deviation

The dimensions were measured according to ISO 3302-1:2014 at a section of the highway joint profile (sample no. 2). According to EN 14188-3 the limits are E1 or E2. The results are shown in table 1.

Defects

The highway joint profile (sample no. 2) was inspected visually. According to EN 14188-3 no defects or irregularities of the profile are allowed which can influence its application.

No surface flaws or irregularities were found in the visual inspection.

Hardness IRHD

Hardness was tested according to ISO 48-2:2021-02, procedure B at the rubber sheets (sample no. 1). According to EN 14188-3 the hardness has to correspond with a defined class. The results are shown in table 2.

Tensile strength and elongation at break

Tensile strength and elongation at break tests were performed according to EN 14840:2005 at 3 dumb-bell test pieces, type 2. The dumb-bell test pieces were punched out of the rubber sheets (sample no. 1). Refer to table 2 for the results.

Recovery at low and high temperatures

Recovery tests were performed according to EN 14840:2005 at sections of the highway joint profile (sample 2) at a distance of 8 mm after storage:

- a) 24 h at -25°C, afterwards store the relaxed profiles for 1 h at -25°C
- b) 72 h at + 70°C, afterwards store the relaxed profiles for 1 h at + 23°C

The results are shown in table 2.

4. Test results

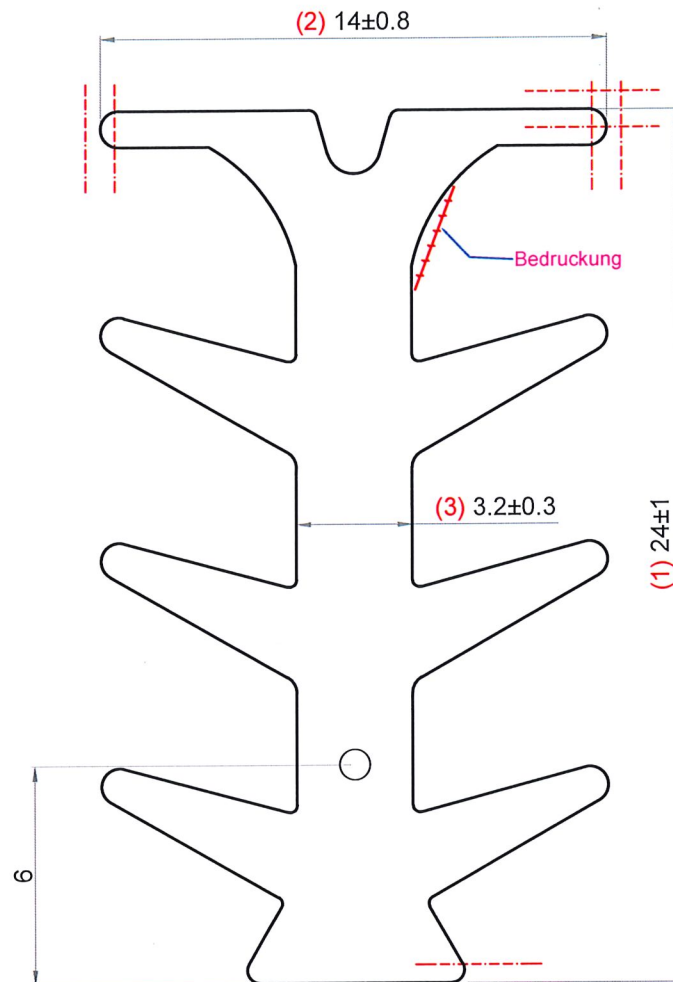


Figure 1: Desired geometry of the profile

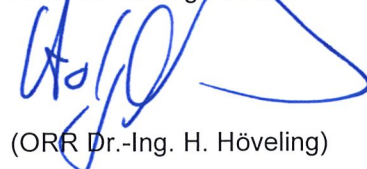
Table 1: Test results of dimensions (test date: 27.09.2021)

Testing point as per Figure 1	Specimen			Median	Nominal dimensions	Class
	1	2	3			
	mm	mm	mm	mm	mm	—
K1/1	23.8	24.0	23.9	23.8	24.0	E1
K1/2	23.5	23.9	23.8			
K2/1	13.9	14.1	14.1	14.1	14.0	E1
K2/2	14.1	14.0	14.2			
K3/1	3.0	3.0	3.0	3.0	3.2	E1
K3/2	3.1	3.0	3.1			
Position of glass fibre	4.6	5.3	5.3	5.2	6.0	for information
Position of glass fibre	5.2	5.4	5.0			

Table 2: Test results (period of testing: 17.09.2021 – 14.10.2021)

Test	Results		Requirements according to
	Single value	Median	
Dimensions	refere to table 1		EN 14188-3
Hardness (IRHD)	—	71 ± 1	E1 or E2
Tensile strength (MPa)			—
Direction of sample lengthwise	9.6 / 10.3 / 9.2	9.6	≥ 9
Direction of sample lengthwise	9.9 / 10.0 / 10.0	10.0	
Elongation at break (%)			≥ 200
Direction of sample lengthwise	372 / 390 / 348	372	(class of hardness 70)
Direction of sample lengthwise	404 / 409 / 403	404	
Recovery at low and high temperatures			
24 h at -25 °C (%)	82 / 81 / 83	82	≥ 65
72 h at +70 °C (%)	88 / 88 / 88	88	≥ 80

Hannover, 27 October 2021
Head of Testing Institute



(ORR Dr.-Ing. H. Höveling)

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