

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 21 April 2022:

- 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

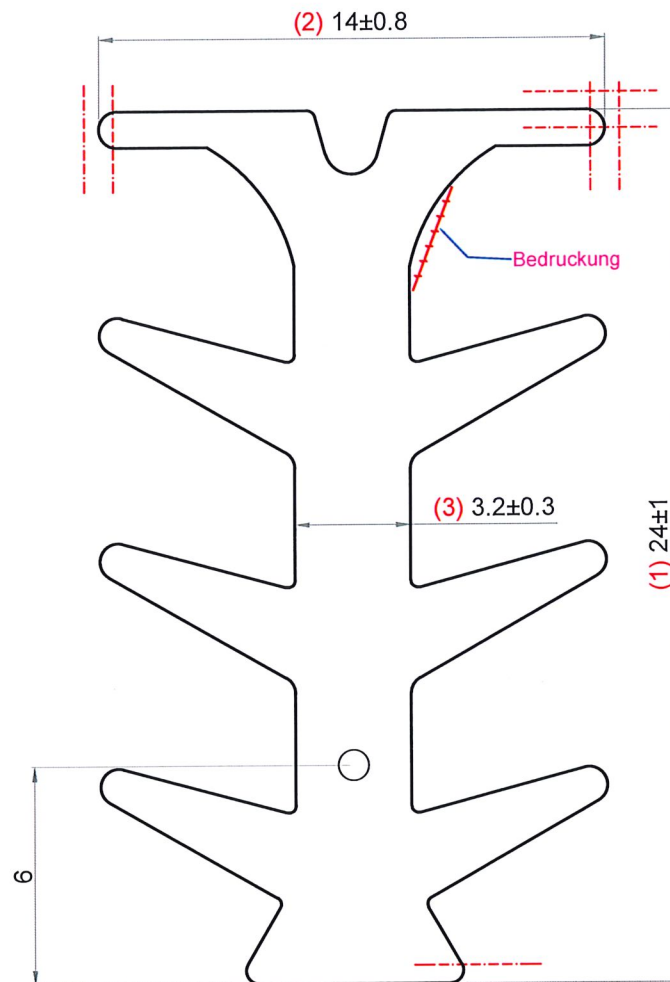


Figure 1: Desired geometry of the profile

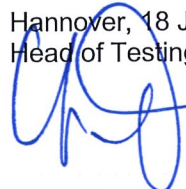
Table 1: Test results of dimensions (test date: 26.04.2022)

Testing point as per Figure 1	Specimen			Median	Nominal dimensions	Class
	1	2	3	—	—	ISO 3302-1
	mm	mm	mm	mm	mm	—
K1/1	24.0	24.1	24.1	24.0	24.0	E1
K1/2	24.1	23.8	23.8			
K1/3	23.9	23.9	24.0			
K2/1	14.3	13.9	13.9	14.1	14.0	E1
K2/2	14.1	14.1	14.1			
K2/3	14.2	13.9	14.0			
K3/1	3.3	3.4	3.3	3.3	3.2	E1
K3/2	3.4	3.3	3.3			
K3/3	3.5	3.3	3.4			
Position of glass fibre	5.6	5.7	5.9	5.7	6.0	for information
Position of glass fibre	5.9	5.6	5.7			

Table 2: Test results (period of testing: 28.04.2022 – 03.05.2022)

Test	Results		Requirements according to
	Single value	Median	EN 14188-3
Dimensions	refere to table 1		E1 or E2
Hardness (IRHD)	—	77 ± 1	—
Tensile strength (MPa)			≥ 9
Direction of sample lengthwise	8.8 / 8.6 / 7.9 / 8.8 / 9.1	8.8	
Direction of sample lengthwise	9.0 / 9.0 / 8.9 / 9.0 / 8.7	9.0	
Elongation at break (%)			≥ 125
Direction of sample lengthwise	413 / 420 / 335 / 421 / 427	420	(class of hardness 85)
Direction of sample lengthwise	405 / 421 / 426 / 419 / 420	420	
Recovery at low and high temperatures			
24 h at -25°C (%)	85 / 85 / 85	85	≥ 65
72 h at +70°C (%)	91 / 90 / 91	91	≥ 80

Hannover, 18 July 2022
Head of Testing Institute



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Contact




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