Institut für Brandschutztechnik
und Sicherheitsforschung

T E S T R E P O R T

on the fire behaviour of construction products
Determination of the gross heat of combustion
pursuant to EN ISO 1716

Test Report No.: 317101603-2,Rev1-en
Date: 23.08.2018
This test report replaces tst report no. 317101603-2 from 15.01.2018
Engineer: A. Schmidt / ko
DD: 819

Client:	**Österreichische Vialit Gesellschaft m.b.H.** Josef-Reiter-Straße 78 A-5280 Braunau/Inn AUSTRIA
Test object:	**asphalt "VIACORE"**
Test samples received:	15.11.2017
Test date:	07.12.2017
Tester:	Andreas Schmidt
Results:	As of page 4
This report comprises:	**5** pages of text

Basis of the inspection:

EN ISO 1716
"Reaction to fire tests for building products - Part 2: Determination of the gross heat of combustion"
Edition: 01/11/2010

ÖNORM EN 13238:
"Reaction to fire tests for building products - Conditioning procedures and general rules for selection of substrates"
Edition: 15/03/2010

ÖNORM EN 13943:
"Fire safety – Vocabulary"
Edition: 15/01/2011

Test programme:

A bomb calorimeter standard test series consisting of three individual tests was carried out on the "resin" component of asphalt “VIACORE” of relevance to the test.

Specimen sampling:

The samples were provided by the client.
IBS Linz drew sample material to produce three samples.

Test specimens received on:

15.11.2017

Sample selection:

The client sampled material – at least 50 g per sample – from which samples were to be produced. IBS Linz selected the individual samples to be tested from the representative material quantity provided by the client.

Water equivalent E:

The water equivalent E of the test device was calculated on the basis of five tests carried out to ascertain the gross heat of combustion of certified benzoic acid, whereby the mean value is 8945.8 J/K.

Acclimatisation / conditioning duration:

The pre-conditioned test specimens were conditioned in accordance with EN 13238:2010 at a room temperature of 23 +/- 2 °C and a relative humidity level of 50 +/- 5 % during a defined period. Conditioning began on the day the sample was received and ended on the day the test was carried out.

Test date:

07.12.2017

Test execution:

At least three tests to establish the gross heat of combustion (PCS) must be carried out on each component of the construction product to be tested. To this end, 0.5 g of combustion aid is added to every 0.5 g of the component and then pressed into tablet form. Test are carried out in accordance with the crucible method pursuant to EN ISO 1716.

The gross heat of combustion (PCS) to be ascertained for the construction product equates to the maximum release of thermal energy at a thermal conversion rate of 100% in an oxygen atmosphere, whereby the water released during the process is in a liquid aggregate state.

Description of the test specimen according to details provided by the applicant:

Asphalt “VIACORE”

Mixture composition:

- Aggregate grain sizes: 92.5% weight by weight (see table for grading ranges)
- Binding agent: 7.5% weight by weight

Grading range as per client information

Width [mm]	Bandwidth [%]
0.063	2 - 13
0.5	5 - 35
2	10 – 72
4	40 – 85
8	40 – 100
11	70 – 100
16	80 – 100

Test observations:

There were no noteworthy occurrences during the tests.
No soot deposits were found in the bomb calorimeter and there were no traces of carbon residue on the crucible wall on completion of the standard tests.

Test results:

Asphalt “VIACORE”

Sample		1 [MJ/kg]	2 [MJ/kg]	3 [MJ/kg]	Mean value [MJ/kg]	Proportion [%]	Proportion [MJ/kg]
Aggregate	PCS	0*	0*	0*	0*	92.5	0
Bitumen	PCS	33.108	33.929	34.163	33.733	7.5	2.530
Total PCS [MJ/kg]							2.530

*) Values assumed as "0" on account of automatic classification A1 as per EC Commission decision 94/611/EC.

The ascertained maximum value of gross heat of combustion for the construction product as a whole is: **2.530 MJ/kg** and is therefore lower than the limit value of 3 MJ/kg as defined in the standard.

The maximum deviations of individual PCS test results in comparison with one another are within the required limit.

The test results relate only to the behaviour of the samples of a construction product under the specific conditions of the test. They should not be misconstrued as the only criterion for evaluating the construction product's potential fire hazard in practical applications. Classification must take the form of a classification report.

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