

Indicative test report

Dawn 2, 100% polyester FR



Name of client: Kvadrat A/S
File no.: PFA10977A
Date: 2017-02-09
Pages: 6 Encl.: 5
Ref: JAG / MPA



DBI

Client information

Client: Kvadrat A/S
Address: Lundbergsvej 10
DK-8400 Ebeltøft
Denmark

The results relate only to the items tested. The test report should only be reproduced in extenso - in extracts only with a written agreement with this institute.

**DBI****1. Material**

Fabric.

Trade name

Dawn 2, 100% polyester FR.

2. Manufacturer

The client is the manufacturer.

3. Nature of test

By request of the client dated 2017-01-05, the product has been subjected to an indicative test procedure of EN 13823:2010 + A1:2014 and EN ISO 11925-2: 2010/AC:2011.

4. Sample

On 2017-01-10 DBI - Danish Institute of Fire and Security Technology received the following sample:

1 pcs of Dawn 2, 100% polyester FR, with dimensions 2605 x 2970 x 0.5 mm.

The weight per unit area at 20°C (undried): 0.26 kg/m² at the state of receipt determined by weight and measures of the sample.

The following information was given by the client:

Composition:	100% polyester FR
Yarn type:	Filament
Binding:	Satin
Width:	App. 300 cm
Weight:	App. 700 g/lin.m
Batch number:	cur372762

One test specimen was prepared from the sample to EN 13823 and the sample was also used for EN ISO 11925-2.

5. Mounting of specimen for Single Burning Item test

A standard mounting of specimen was carried out in accordance with EN 13823 as follows:

Mounting:	Standard mounting option b) in clause 5.2.2 of EN 13823.
Substrate:	10 mm calcium silicate, cf. EN 13238.
Fixing means:	The fabric was wrapped around and stabled onto the back of the substrate, with the face side inwards.
Joints:	Mounted without joints.

The specimens were assembled by DBI.



6. Conditioning

On 2017-01-10 the specimens were stored in a conditioning room with an atmosphere of relative humidity of $50 \pm 5 \%$ and a temperature of $23 \pm 2 \text{ }^\circ\text{C}$. The test specimens were kept in this room until the tests were performed.

7. Test method

The test was performed in accordance with:

EN 13823:2010 + A1:2014 Reaction to fire tests for building products - Building products excluding flooring exposed to the thermal attack by a single burning item

EN ISO 11925-2:2010 and Reactions to fire test – Ignitability of products subjected to direct
EN ISO 11925-2: 2010/AC:2011 impingement of flame Part 2: Single-flame source test.

8. Test results

8.1 EN 13823:2010 + A1:2014

Date of test: 2017-02-07.

1 test was performed.

During the test the following measurements were made: Volume flow in the exhaust duct, production of carbon dioxide, concentration of oxygen, and production of light-obscuring smoke. Based on these measurements the rate of heat release and the rate of smoke production were calculated.

The graphs, enclosures 1-4, show for the test performed:

Enclosure 1

- Average Heat Release Rate $\text{HRR}_{\text{av}}(t)$
- Total Heat Release THR (t)

Enclosure 2

- Average Heat Release Rate per unit time $[1000 \times \text{HRR}_{\text{av}}(t)/(t-300)]$
- $\text{Figra}_{0,2\text{MJ}}$ -values

Enclosure 3

- $\text{Figra}_{0,4 \text{ MJ}}$ -values
- Smoke Production Rate $\text{SPR}_{\text{av}}(t)$

Enclosure 4

- Total Smoke Production TSP(t)
- Smoke Production Rate per unit time $[10000 \times \text{SPR}_{\text{av}}(t)/(t-300)]$

**DBI**

The test results are shown in table 1.

	Test No. 1
FIGRA _{0,2 MJ} [W/s]	0.0
FIGRA _{0,4 MJ} [W/s]	0.0
THR _{600s} [MJ]	0.27
SMOGRA [m ² /s ²]	0.0
TSP _{600 s} [m ²]	38.7
FDP _{f≤10s} [yes/no]	No
FDP _{f>10s} [yes/no]	No
LFS < edge of specimen [yes/no]	Yes

Table 1.

FDP_{f≤10s}: Flaming Droplets/Particles burning less than 10 seconds.

FDP_{f>10s}: Flaming Droplets/Particles burning more than 10 seconds.

LFS: Lateral Flame Spread on the long wing of the test specimen.

There were no recorded observations of significance during the test.

Photographs of the test specimens show the effect of the damages, see enclosures 5

Enclosure 5: Test No. 1

8.2 EN ISO 11925-2:2010 and EN ISO 11925-2: 2010/AC:2011

Date of test: 2017-01-27

Flame application time: 30 sec.

Test running time: 60 sec.

Edge flame impingement

Specimen No.	Ignition (yes/no)	Flame spread > 150 mm	Time (sec) to reach 150 mm mark	Ignition of filter paper (yes/no)
1L	Yes	No	-	No
2C	Yes	No	-	No

L: Lengthwise C: Crosswise

Surface flame impingement

Specimen No.	Ignition (yes/no)	Flame spread > 150 mm	Time (sec) to reach 150 mm mark	Ignition of filter paper (yes/no)
1L	Yes	No	-	No
2C	Yes	No	-	No

L: Lengthwise C: Crosswise

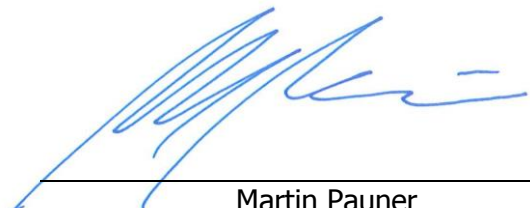
**DBI**

9. Statement


The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

The product designated Dawn 2, 100% polyester FR indicates fulfils the criteria for a class B-s1,d0 product according to EN 13501-1:2007 + A1:2009.

This report can not be used for classification purpose or for approval by the authorities.



Martin Pauner
M.Sc.Civ.Eng



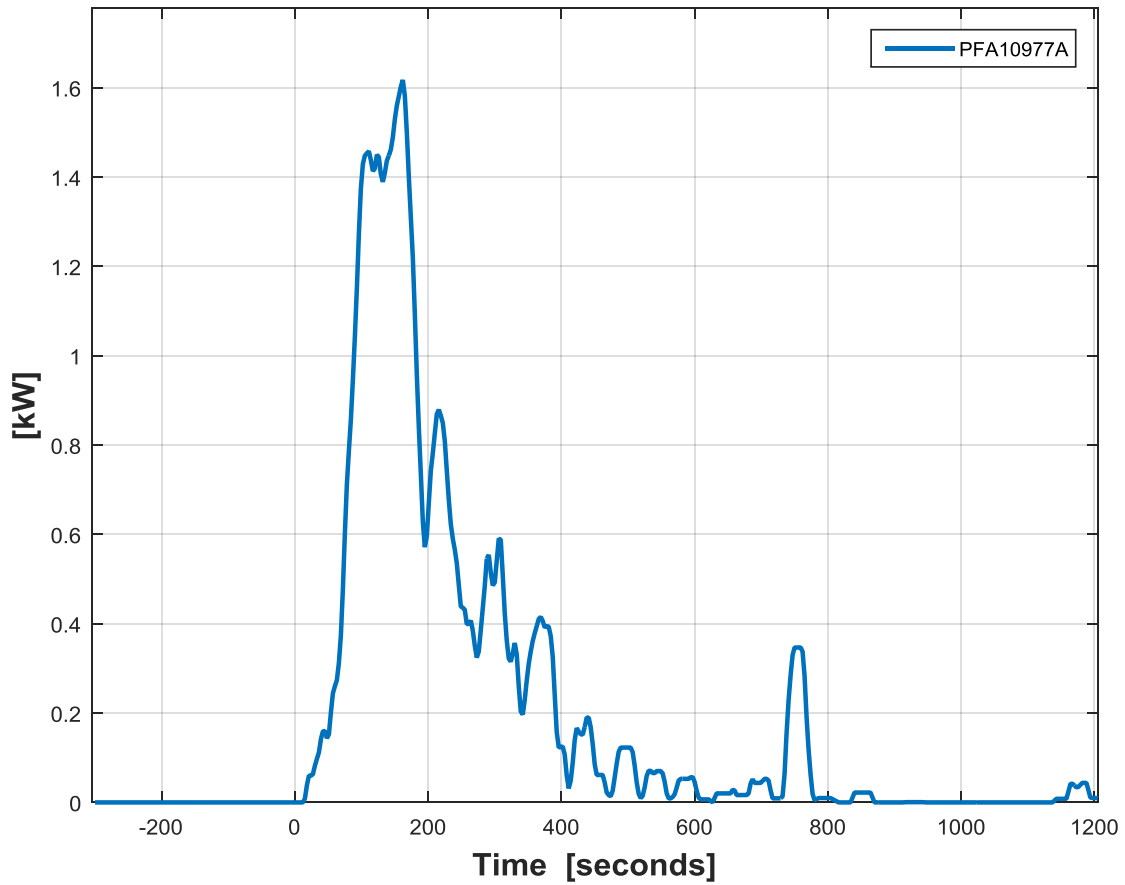
Jeppe Ankjær
B.Eng. Architectural Engineering

Kvadrat A/S
Lundbergsvej 10
DK-8400 Ebeltøft
Denmark

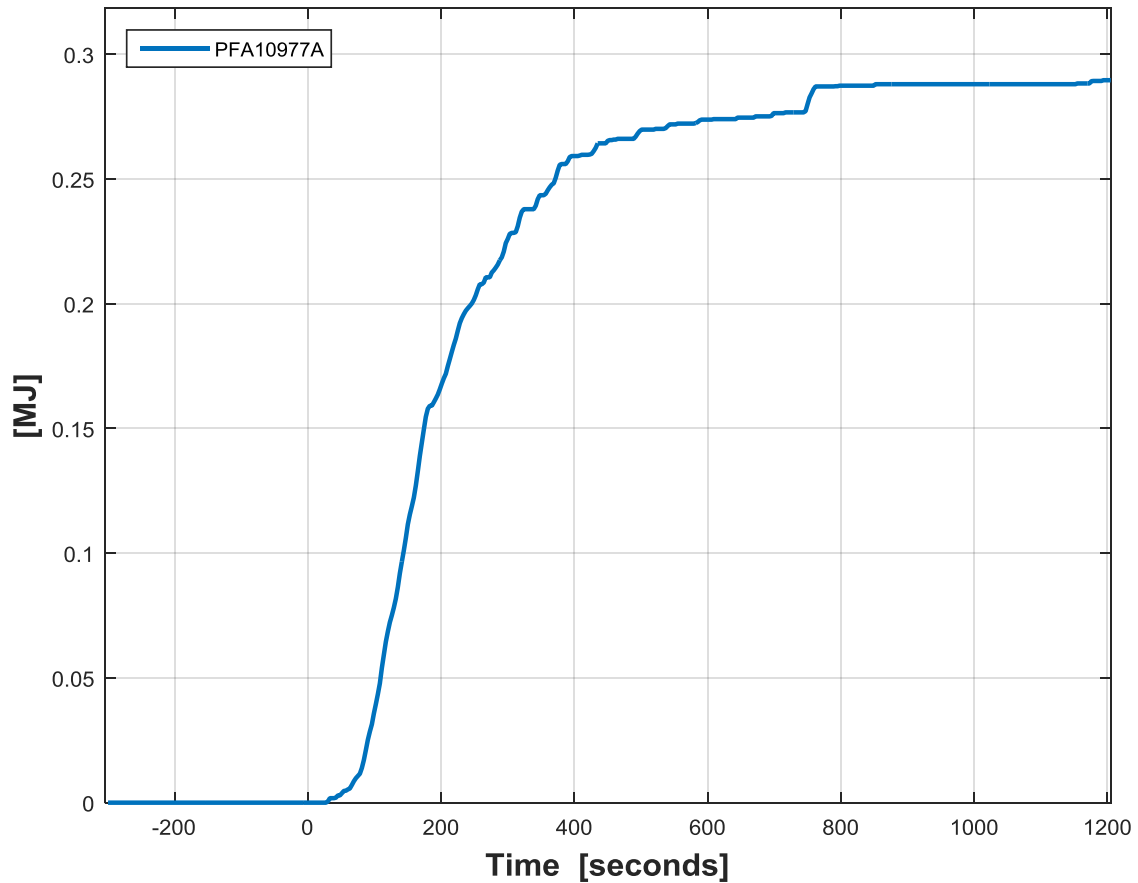


DBI

Average Heat Release Rate HRRav(t)

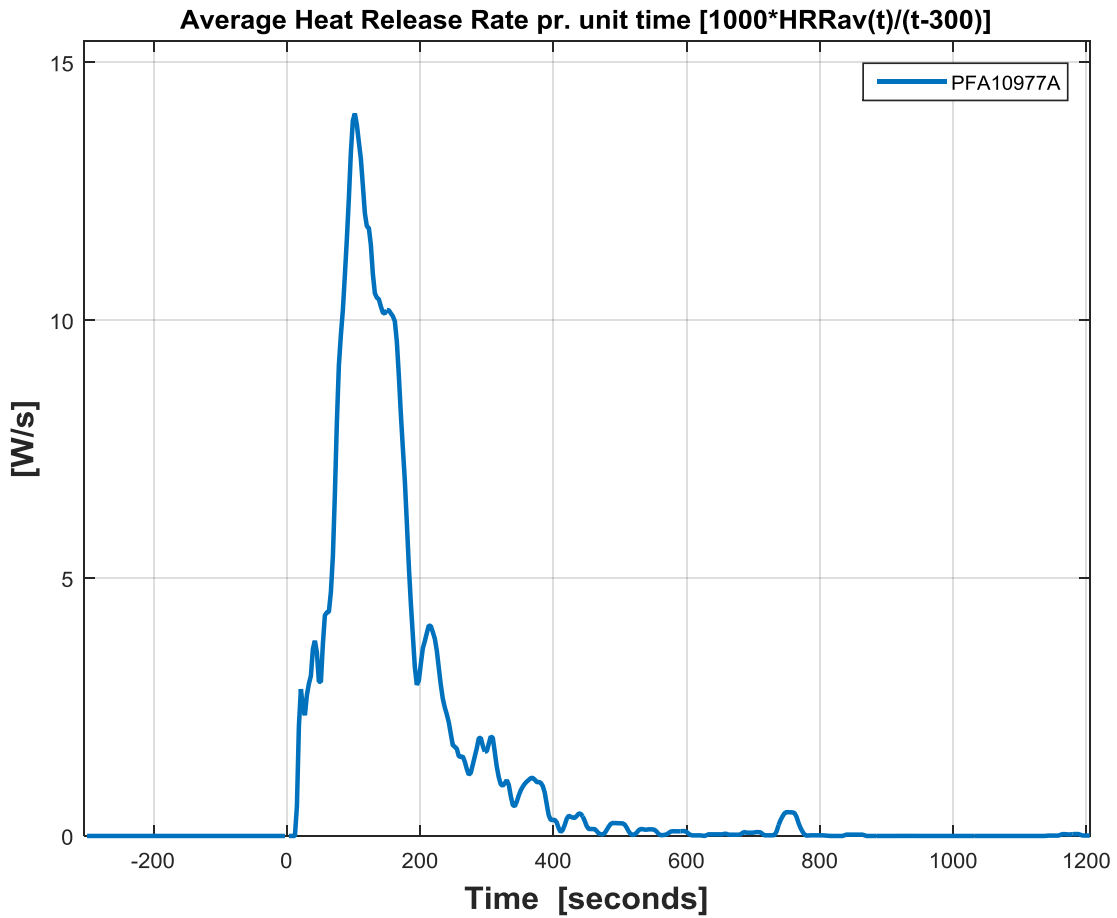


Total Heat Release THR(t)

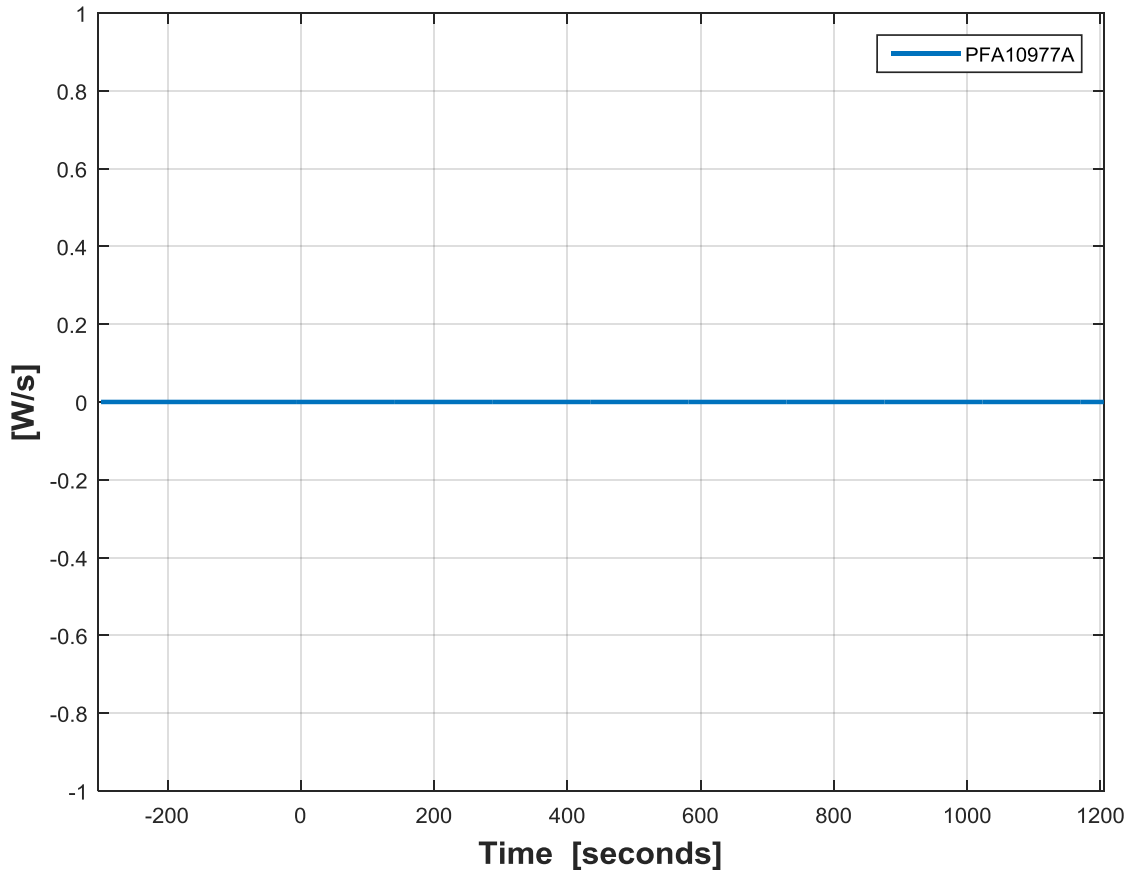




DBI



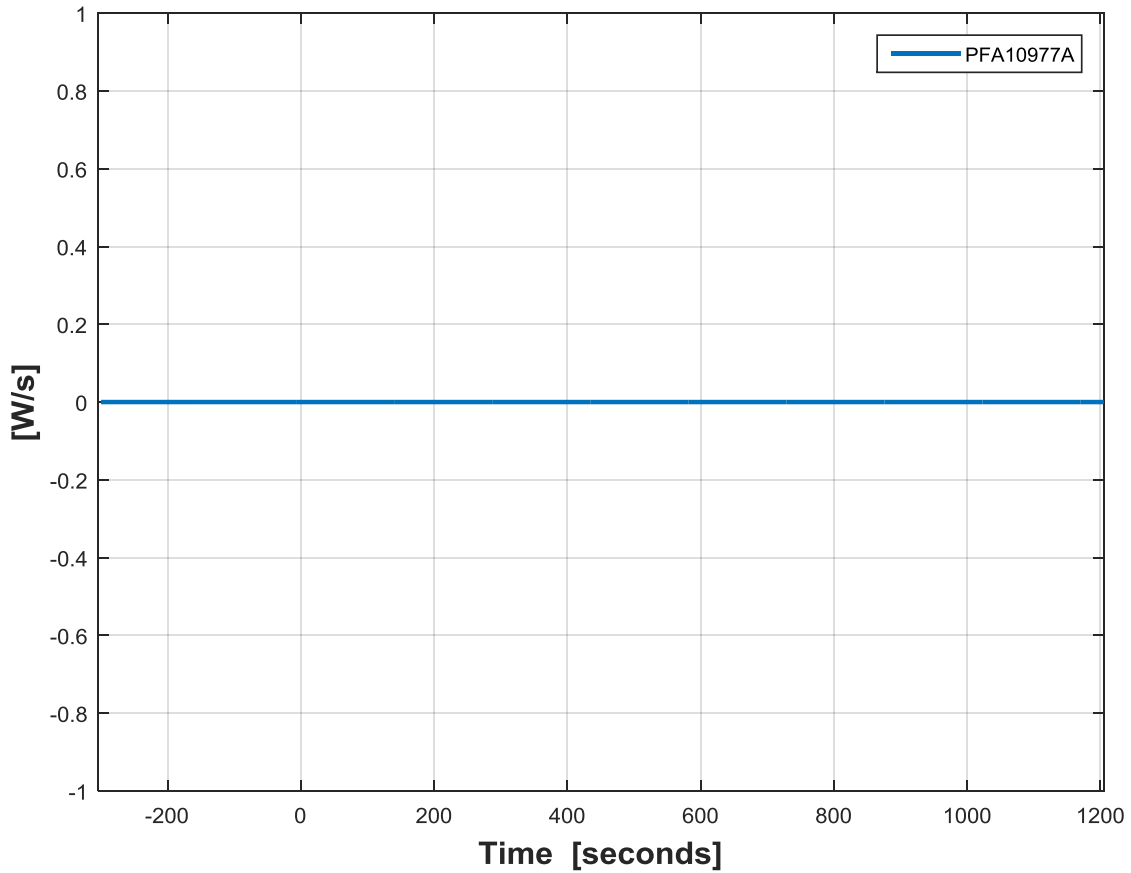
FIGRA_{0.2MJ}-values



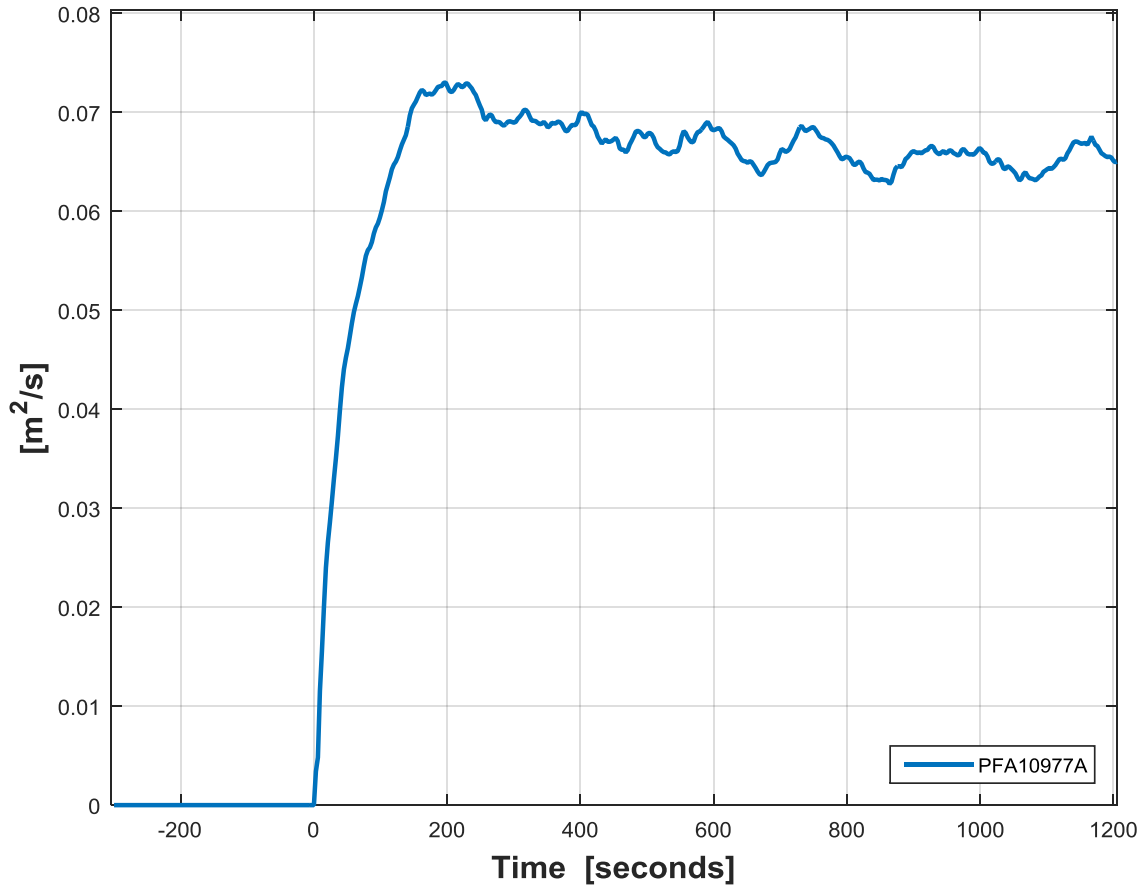


DBI

FIGRA_{0.4MJ}-values



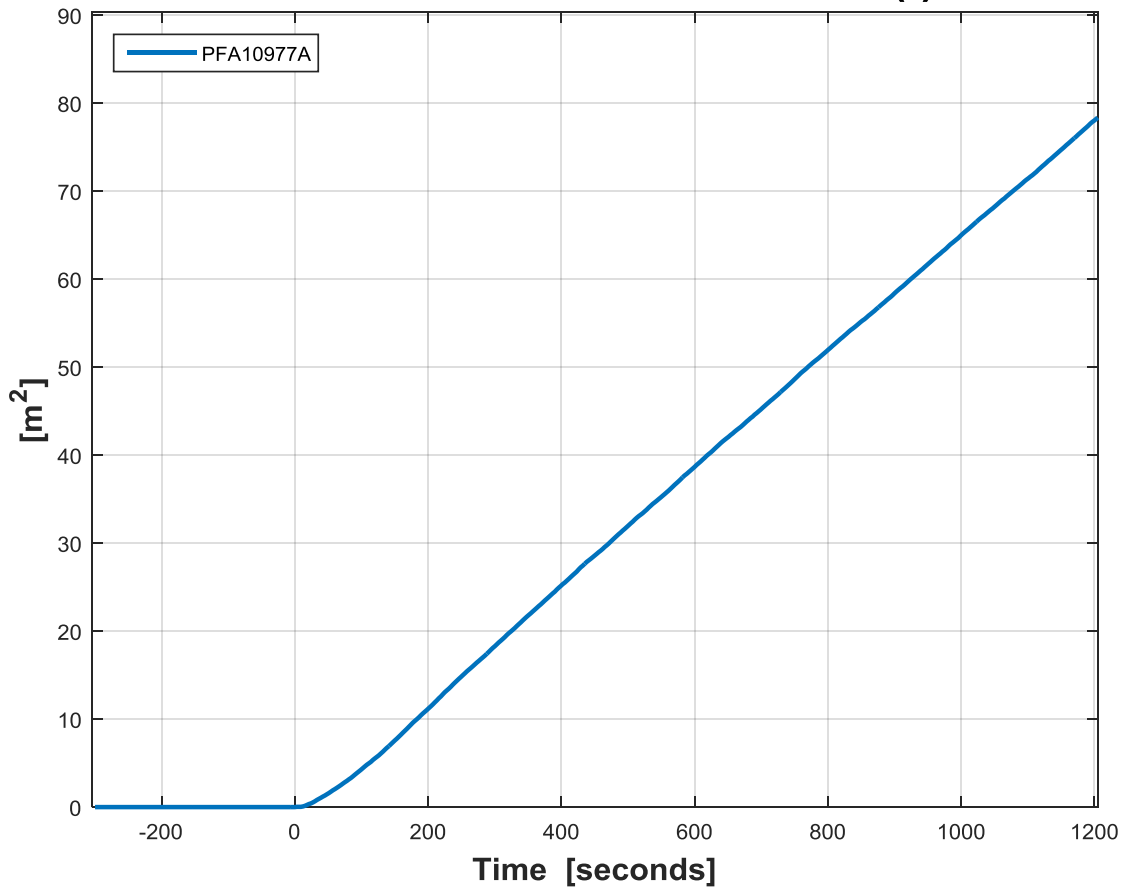
Smoke Production Rate SPRav(t)



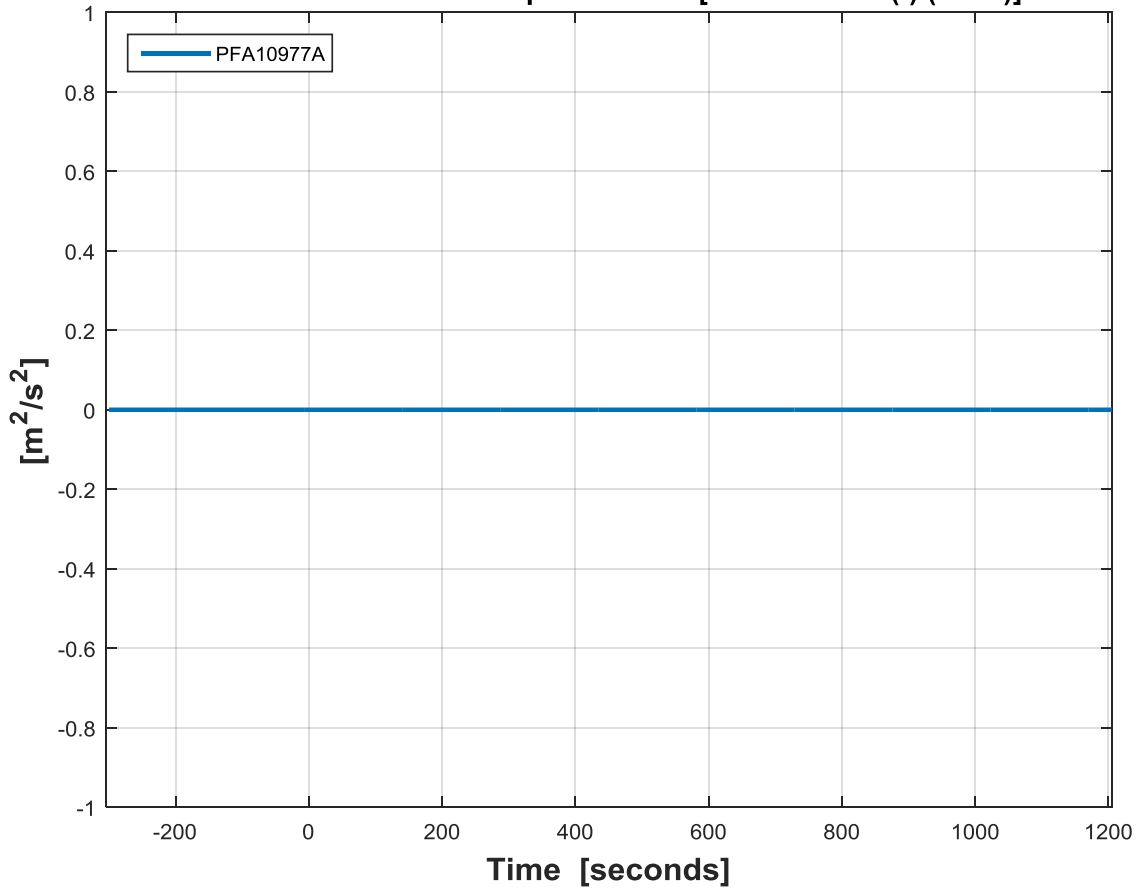


DBI

Total Smoke Production TSP(t)



Smoke Production Rate pr. unit time [10000*SPRav(t)/(t-300)]





DBI

TEST NO. 1

