



INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a.s.
třída T.Bati 299, 764 21 Zlín – Czech Republic
TESTING LABORATORY

ATTEST

No. 412204185/1

on sample:
Polypropylene TONFA TF

client:
POLYGEMA s.r.o.
Jelení 463, 742 45 FULNEK, IČ: 25834479

Values obtained of the technical parameters

Characteristics measured	Testing method	Unit	Resulting value ¹⁾	Measurement uncertainty ²⁾
Weight	P-09-23	g	498	1
Color	-	-	black	-
Length	P-09-23	mm	584	1
Length of the straight grip		mm	135	1
Length of the side handle		mm	120	1
Diameter of the percussive part		mm	30,8	0,1
Flexural Strength of baton's body		MPa	39,5 ³⁾	0,9
Flexural Strength of side handle		N	926 ³⁾	6

Explanations:

- 1) Arithmetic mean value
- 2) Sample standard deviation of arithmetic mean value
- 3) All test pieces without crash

Issue on: 12th November 2009
Valid till: 30th November 2011



Doc. Ing. Vladimír Klepal, CSc.
Head of the testing laboratory

*The results given in this Attest apply only to the sample tested by our laboratory.
Without a written consent by the Institut pro testování a certifikaci, a.s. the Attest may not be reproduced unless as a whole!*

Sample description and identification:

The sample – **Polypropylene TONFA TF**, was received for testing and registered under the number 412204185/01

Figure 1: Polypropylene TONFA TF, Registration number: 412203967/01

**Sampling method:**

The sample was supplied by the client.

Work requested:

1. Weight
2. Color
3. Length
4. Length of the straight grip
5. Length of the side handle
6. Diameter of the percussive part
7. Flexural Strength of the percussive part
8. Flexural Strength of the side handle

Testing method used:

ad 1,3 – 8 Testing of plastic batons ITC P-09-23

Testing equipment used:

- ad 1 Balance Sartorius 5500 g
- ad 3 Tapeline
- ad 4,5,6 Mitutoyo calliper (0 – 150)mm
- ad 7 INSTRON 3365 universal tensile machine, Mitutoyo calliper (0 – 150)mm
- ad 8 INSTRON 3365 universal tensile machine

Conditioning:

Conditioning time: 24 hours, conditioning temperature: 23 °C, relative humidity: 50%



Test conditions :

- ad 1 Tested the finished product, number of test pieces:5
- ad 2 Tested the finished product
- ad 3 – 6 Tested the finished product, number of test pieces:5
- ad 7 Test pieces were prepared from cylindrical part of batons, length 400 mm, three-point arrangement; distance of supports: 300 mm, mandrel radius of 12,5 mm, radius of supports 10 mm, speed 10 mm/min, number of test pieces: 3.
- ad 8 Tested the finished product, speed 50 mm/min, number of test pieces:3

Test results :

Test results are given in the following tables :

Table 1: Polypropylene TONFA TF, Registration number: 412204185/01

Characteristics measured	Unit	Resulting value ¹⁾	Measurement uncertainty ²⁾
Weight	g	498	1
Color	-	black	-
Length	mm	584	1
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- 3) All test pieces without crash

Tested by:

- ad 1,3-6,8 Ing. Hrnčiarová Anna 9.-11.11.2009
- ad 2 Ďurčová Pavla, Špendlíková Miroslava, Pospíšilová Blažena 9.11.2009
- ad 7 Ďurčová Pavla 11.11.2009

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