



TESTS REPORT

XP CEN/TS 14243 (June 2010)

Materials produced from end of life tyres – Specification of categories based on their dimensions and impurities and methods for determining their dimensions and impurities

RUBBER GRANULE GBTA 102040

BIOGOMA

LABORATORY TEST REPORT N° R181228-C1

LE MANS, 04/10/2018

This report is composed of 3 pages and 2 appendixes.

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The results are valid only for the tested samples. Complete results available on request.

LABOSPORT S.A.S.

Technoparc du Circuit des 24 Heures • Chemin aux Bœufs • 72100 Le Mans, France
contact@labosport.com

Tél.: +33 (0)2 43 47 08 40 • Fax: +33 (0)2 43 47 08 28

www.labosport.com

1 ■ CLIENT DETAILS

Company : BIOGAMA
COVAO DO BREJO
2025 TREMEZ
PORTUGAL

Date of order: 03/08/2018

Reception date: 03/09/2018

Sample reference: 024606 - **GBTA 102040**

2 ■ TESTS PROGRAM

LABOSPORT France has been commissioned by **BIOGOMA** to carry out the following laboratory tests on rubber granules **GBTA 102040** primarily designed for synthetic turf infill:

- Identification with particle size, shape and bulk density
- Measurement of textile fibre, metal and other impurities according to:
 - **XP CEN/TS 14243** (Materials produced from end of life tyres – Specification of categories based on their dimensions and impurities and methods for determining their dimensions and impurities)

3 ■ RESULTS

❖ Identification of the rubber granule GBTA 102040:

Properties	Method	Unit	Results	NF P 90-112* requirements
Particle size	EN 933-1	mm	1.6 – 3.15	d ≥ 0.5 mm D ≤ 3.15 mm
Particle shape	EN 14955	-	Angular – A2	-
Bulk density	EN 1097-3	g/cm ³	0.43	-

* The requirement of the NF P 90-112 (2016) standard are given only for information.

➔ Picture and particle size curve of the tested sample are in Annex of this report.

❖ **Measurement of fibre rate, metal rate and other impurities in %:**

Element	Method	Units	Results
Fibre rate	XP CEN/TS 14243	(%) (g)	0 ⁽¹⁾ 0 (done on a mass of 218.6g)
Metal rate	XP CEN/TS 14243	(%) (g)	0 0 (done on a mass of 549.50g) ⁽²⁾
Impurities rate (glass, sand or non-magnetic metal etc.)	XP CEN/TS 14243	(%) (g)	0 0 (done on a mass of 151.8g) ⁽³⁾

- (1) The Annex C of the XP CEN/TS 14243 standard defines that textile fibre integrated inside rubber grains are not considered on the result. At least 150g of sample mass is necessary to conduct the test.
- (2) The Annex B of the XP CEN/TS 14243 standard defines the test has to be conducted with a sample mass close as possible to 500g.
- (3) According to Annex D of the XP CEN/TS 14243 standard, on the mass (about 500g) used for the determination of the metal rate (%), a mass of about 150g is taken to determine the impurities rate.

4 ■ CONCLUSION

The tested sample "Rubber infill **GBTA 102040**" do not present metal, fibre and other impurities according to the test method of **XP CEN/TS 14243** standard (Materials produced from end of life tyres – Specification of categories based on their dimensions and impurities and methods for determining their dimensions and impurities).

Le Mans, 04/10/2018



Benoit Bossuet
Synthetic Surfaces Technical Manager

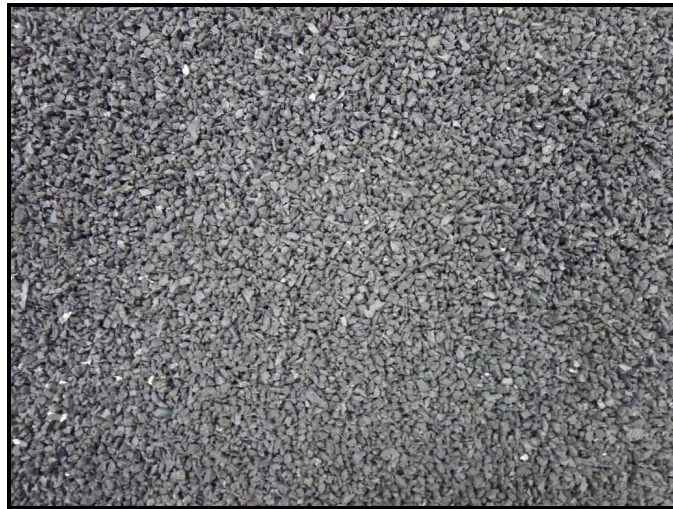



Steve Bazeille
Laboratory Dpt Manager

ANNEX 1 : RUBBER GRANULE GBTA 102040

Picture

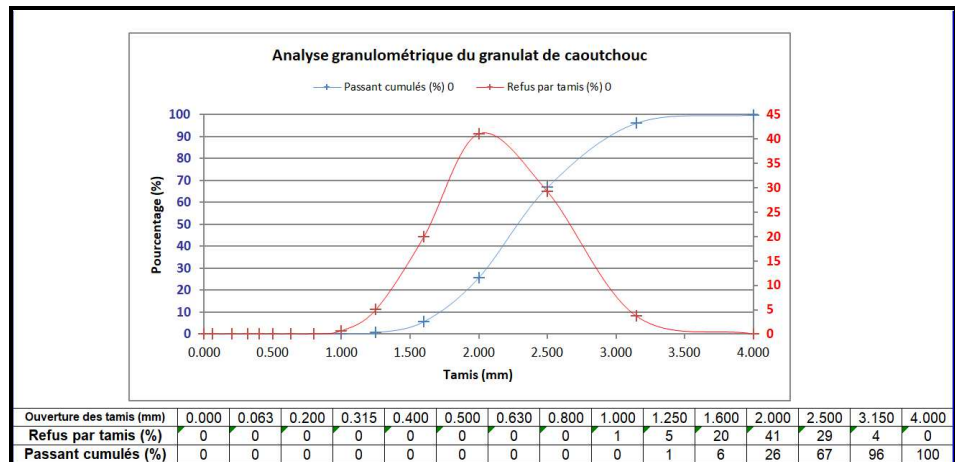
General View



Microscope view



Particle Size curve



ANNEX 2 : RUBBER GRANULE GBTA 102040

Picture of textile fibre integrated to rubber

Not considered for the calculation as requested by the test method

Only for illustration

