

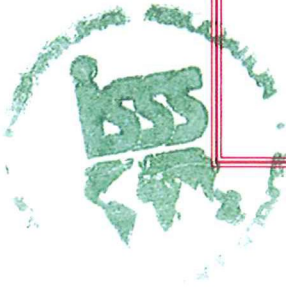
LABORATORY TESTS

**Product : « EPDM 1,0 - 3,5 mm »
RUBBER GRANULES**

Company : MELOS GMBH

Test report n° R090828-A1

Le Mans, 11/05/2009



Scope of application:

NF P90-100 standard : *Surfaces for sports areas - Synthetic material surface-coated athletics tracks and run-up areas.*

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This report, valid for 3 years, contains 4 pages.

Results are only valid for the above product.

1. APPLICANT

Company : MELOS GMBH
Date of order : 14/04/2009
Date of sample receipt : 10/04/2009
Sample reference : 004790

2. IDENTIFICATION

- Commercial name : EPDM 1,0 - 3,5 mm
- Particle shape : /
- Nature : EPDM
- Density : /
- Particle size : 1,0 - 3,5 mm
- Application : Top layer of Athletic surface when mixed with PU binder

3. TEST PROGRAMME

Granules have been tested in accordance with NF P90-100 standard : *Sport surfaces - Surfaces for sports areas - Synthetic material surface-coated athletics tracks and run-up areas.*

As required in this standard, following tests have been realized:

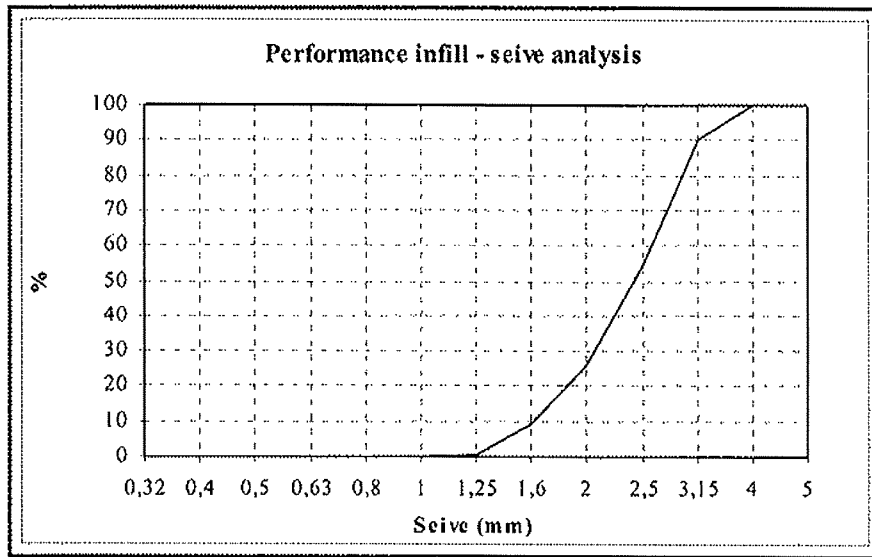
- A chemical identification of the granules (TGA) has been realized.
- Particle size according to EN 933-1 standard
- Bulk density according to NF EN 1097-3 standard

Results are detailed in section 4.

4. RESULTS FOR TESTS ACCORDING TO NF P90-100 STANDARD

4.1. Physico-chemical analysis

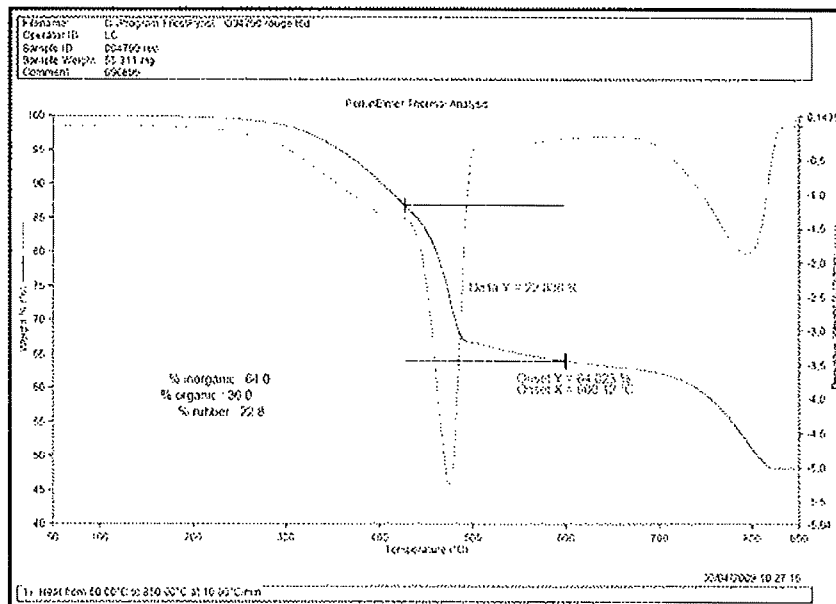
Tests	Results	Requirements
Particle size (mm) (XP T 47-752)	1,600 - 3,150	d ≥ 1,0 mm D ≤ 4,0 mm
Bulk density (g/cm ³) (NF EN 1097-3)	0,650	/
TGA	% mineral : 64,0 % organic : 36,0 % elastomer : 22,8	% elastomer ≥ 21%
Polymer Type	EPDM	EPDM



Sieve sizes (mm)	0,32	0,4	0,5	0,63	0,8	1	1,25	1,6	2	2,5	3,15	4	5
Added up passing (%)	0	0	0	0	0	0	0,53	9,02	25,9	54,7	90,5	100	100

4.2. TGA

This test consists in registering the sample mass variations (solid or liquid) according to the temperature. The obtained curve is named thermogram. It records simultaneously the weight curve and its primary derivative, that allows to know the temperature for which one the body degradation speed is the most important.



5. CONCLUSION

The particle size of the granule is 1,600 - 3,150 mm and complies with the NF P90-100 requirement.

Elastomer rate in the tested granule is 22,8% and complies with NF P90-100 requirement.

Le Mans, May 11th, 2009

Benoit Bossuet

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