

Applicant Name: I-BADAK Co., Ltd**Original Report Date: May 8, 2015****Revised Date: May 22, 2015****Applicant Address: 547-1, SEONAM-RI, EUNHYEON-MYEON, YANGJU-SI, GYEONGGI-DO, KOREA****Manufacturer address: 480-7, Sinchang-myeon, Seobunam-ro, Asan-si, Chungcheongnam-do, Republic of Korea****Attn: Ryu Jepung****Sample Description:**

Product: SAFEPLAN (sheet type)

Model: Homogeneous Rubber floor covering/2mm

Samples Quantity: 32 pieces

Sample ID: S150331010SHF-081~111; S150519002SHF-001

Date Received: 2015-03-27; 2015-05-18

Date Test Conducted: 2015-03-27~2015-05-08; 2015-05-18~2015-05-22

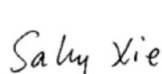
Tests Conducted:

Test Methods: ASTM F1859-12

Conclusion:

For details refer to attached page(s). Supersede Report No. 150331010SHF-BP-2 (Revise the result of thickness)
The conclusions of this test report may not be used as part of the requirements for Intertek product certification.
Authority to Mark must be issued for a product to become certified.

Should you have any queries about the test report, please contact:

Approved by:**Checked by:****Prepared by:**Sun Sun
Assistant ManagerJodie Zhou
Technical supervisorSally Xie
Technical supervisor

Test Report

Report Number:150331010SHF-BP-2R1

Test Items, Method and Results: ASTM F1859-12

Test item	Test method	Requirement ¹	Test result	Verdict
Wear layer thickness	ASTM F410	min, 0.040 in. (1.0 mm)	Homogeneous Rubber sheet ²	N/A
Hardness	ASTM D2240	≥85 Shore A	Average: 89	Pass
Modulus at 10% Elongation	ASTM D412	≥300 psi (2.07 MPa)	Average: 30.9MPa	Pass
Static Load Limit	ASTM F970	≤0.005 in. (0.127 mm) at 250 lb (113.4kg) load	Average: 0.02mm	Pass
Resistance to Chemicals	ASTM F925	No more than a slight change in surface dulling, surface attack or staining	See Appendix B for details	Pass
Resistance to heat	ASTM F1514	Average $\Delta E^* \geq 8.0$ after 7 days exposure to 70°C	Average $\Delta E^* = 1.04$	Pass
Resistance to light	ASTM F1515	Average $\Delta E^* \geq 8.0$ after a 300h exposure	Average $\Delta E^* = 5.80$	Pass
Thickness ³	ASTM F386	As specified ± 0.006 in. (± 0.15 mm)	Declared: 2mm Average: 2.12mm	Pass
Width	ASTM F1859	Not less than as specified	Declared: 1000mm Average: 1000mm	Pass
Length	ASTM F1859	Not less than as specified	Declared: 1220mm Average: 1222mm	Pass

Note:

1. The requirement is according to ASTM F1859-12 Table 1.
2. The requirement is for product Heterogeneous (Layered) Rubber Sheet Floor. The test is not applicable for Homogeneous Rubber Sheet Floor. N/A= Not applicable.
3. Sample for thickness test was received on date 2015-05-18, Sample ID: S150519002SHF-001

Appendix A: Sample photos



Sample received

ORIGINAL

Appendix B Test result of Resistance to Chemicals

Regent	Rating		
	Surface attack	Color change	Surface dulling
White vinegar (5% acetic acid)	0	1	0
Rubbing alcohol (70% isopropyl alcohol)	0	0	0
Sodium hydroxide solution (5% NaOH)	0	1	0
Hydrochloric acid solution (5% HCl)	0	1	0
Sulfuric acid solution (5% H ₂ SO ₄)	0	0	0
Household ammonia solution (5% NH ₄ OH)	0	0	0
Household bleach (5.25% NaOCl)	0	0	0

According to ASTM F925-13, rating 0-3 represents:

0 = no change; 1 = slight change; 2 = moderate change; 3 = severe change.

Surface Dulling - Indicating that the specimen suffered from a loss of gloss,

Color Change - Indicating that the specimen suffered discoloration or bleaching, or both, and

Surface Attack - Indicating that the specimen suffered surface damage such as softening, warping, swelling, blistering, peeling, raised or rough area.

The End of Report

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