



Evaluation Report CCMC 13092-R

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Re-evaluation in Progress

Tech 3500, Tech 5000, Tech 7000 & Céramitech

1. Opinion

It is the opinion of the Canadian Construction Materials Centre (CCMC) that “Tech 3500, Tech 5000, Tech 7000 & Céramitech”, when used as an acoustical underlay in accordance with the conditions and limitations stated in Section 3 of this Report, complies with the National Building Code 2005:

- Clause 1.2.1.1.(1)(a), Division A, using the following acceptable solutions from Division B:
 - Appendix A-9.11.1.1.(1) Impact Noise

This opinion is based on CCMC's evaluation of the technical evidence in Section 4.1 provided by the Report Holder.

Ruling No. 04-17-121 (13092-R) authorizing the use of this product in Ontario, subject to the terms and conditions contained in the Ruling, was made by the Minister of Municipal Affairs and Housing on 2004-10-15 (revised on 2009-08-12) pursuant to s.29 of the Building Code Act, 1992 (see Ruling for terms and conditions). This Ruling is subject to periodic revisions and updates.

2. Description

“Tech 3500, Tech 5000, Tech 7000 & Céramitech” products are underlays made from select non-woven needle-punched polypropylene and polyester fibres with polyethylene.

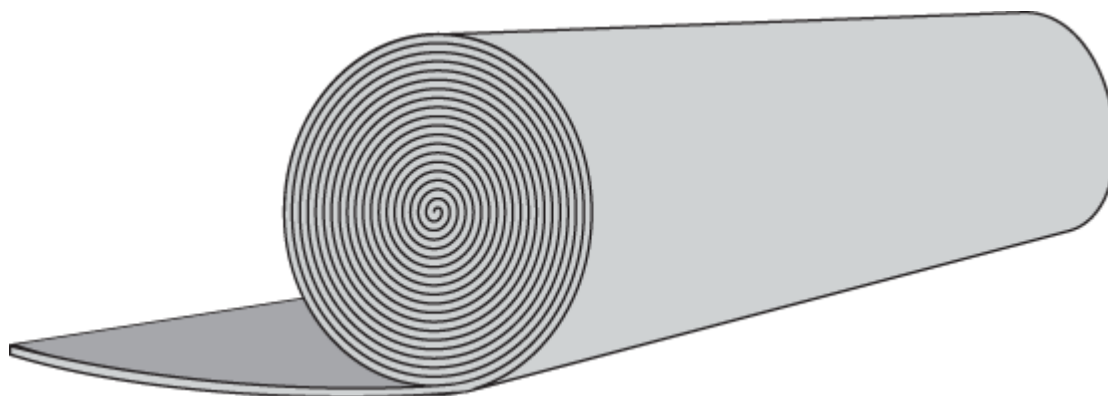
The products are available in the following thicknesses: 3.23 mm, 5.03 mm, 6.61 mm and 3.369 mm. A roll varies between 13 m and 17.28 m in length and between 1 070 mm and 1 648 mm in width.

3. Conditions and Limitations

CCMC's compliance opinion in Section 1 is bound by the “Tech 3500, Tech 5000, Tech 7000 & Céramitech” being used in accordance with the conditions and limitations set out below.

- The products are to be used over concrete or wood subfloors.
- The products must be glued to the subfloor.

- The products must be installed in accordance with the requirements of the technical manual published by Soleno Textiles Techniques Inc., dated October 2002.
- The products must be stored for 48 hours in the location where they will be installed before being fastened to the subfloor.
- Finish flooring, such as ceramic tile and hardwood floors may be installed over the “Céramitech” product as per Soleno Textiles Techniques Inc.'s Technical Manual.
- The products' joints must be sealed with adhesive tape.
- Each roll must have a legible label or stamp with the following information:
 - manufacturer's identification, and
 - the phrase CCMC 13092-R.



4. Technical Evidence

CCMC's Technical Guide for “Tech 3500, Tech 5000, Tech 7000 & Céramitech” sets out the nature of the technical evidence required by CCMC to enable it to evaluate a product as an acceptable or alternative solution in compliance with the NBC 2005. The Report Holder has submitted test results for CCMC's evaluation. Testing was conducted at independent laboratories recognized by CCMC. The corresponding test results for “Tech 3500, Tech 5000, Tech 7000 & Céramitech” are summarized below.

4.1 NBC 2005 Compliance Data for “Tech 3500, Tech 5000, Tech 7000 & Céramitech” on which CCMC Based its Opinion in Section 1

4.1.1 Material Requirements

Table 4.1.1.1 Physical properties of “Tech 3500, Tech 5000, Tech 7000 & Céramitech” products

Property	Unit of measure	Results			
		Tech 3500	Tech 5000	Tech 7000	Céramitech
Length	mm	17 300	17 280	17 300	13 000
Width	mm	1 630	1 648	1 630	1 070
Overall thickness	mm	3.23	5.03	6.61	3.36
Base weight	g/m ²	378.1	536.3	1 056	434.4
Tear strength (machine direction)	N	536.6	892.8	1 853	577.7
Tear strength (cross machine direction)	N	765.1	1 261	2 528	656.1

4.1.2 Performance Requirements

4.1.2.1 Acoustical Performance

For the acoustical tests the products were installed in floor/ceiling assemblies. The field sound transmission class (FSTC) was established in accordance with ASTM E 413-04, “Classification for Rating Sound Insulation,” based on testing in accordance with ASTM E 336-09, “Measurement of Airborne Sound Attenuation between Rooms in Buildings.”

The test values are only for the complete systems tested. No acoustical rating for the underlay mat itself is provided in this Evaluation Report.

In addition, the manufacturer submitted floor/ceiling assemblies for optional testing to establish the field impact insulation class (FIIC). The FIIC was established in accordance with ASTM E 989-06, “Determination of Impact Insulation Class (IIC),” based on testing in accordance with ASTM E 1007-04e1, “Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structures.”

Table 4.1.2.1.1 Test results for “Tech 3500, Tech 5000, Tech 7000 & Céramitech” products


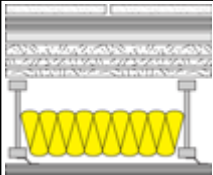
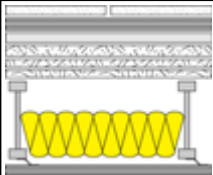
Elements in Assembly	FSTC	FIIC	Profile
Ceramic tiles: <ul style="list-style-type: none"> • bed of mortar • Céramitech • 203 mm concrete slab 	58	56	
Ceramic tiles: <ul style="list-style-type: none"> • 9.5 mm plywood • 12.7 mm plywood • Céramitech • 38.1 mm concrete topping • 20.3 mm waferboard • 330 mm Open Joist 2000™ wood truss, 406 mm o.c. • 152 mm blown-in cellulose • 13 mm resilient metal channels, 610 mm o.c., installed perpendicular to trusses • 15.9 mm Type X gypsum board 	59	60	
Wood floor assembly: <ul style="list-style-type: none"> • AD-316 adhesive • Tech 3500 membrane • AD-316 adhesive • 38.1 mm concrete topping • insulating fibreboard • 15.9 mm plywood • I-joists • glass fibre insulation • 13 mm resilient metal channels, 406 mm o.c. • 2x15.9 mm Type X gypsum boards 	58	59	

Table 4.1.2.1.1 Test results for “Tech 3500, Tech 5000, Tech 7000 & Céramitech” products (cont.)



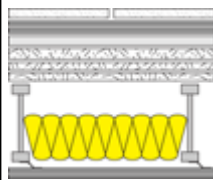

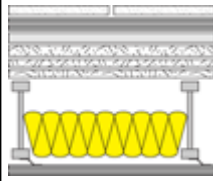
Elements in Assembly	FSTC	FIIC	Profile
Wood floor assembly: <ul style="list-style-type: none"> • AD-316 adhesive • Tech 3500 membrane • AD-316 adhesive • 203.2 mm concrete slab 	58	58	
Wood floor assembly: <ul style="list-style-type: none"> • AD-316 adhesive • Tech 5000 membrane • AD-316 adhesive • 203.2 mm concrete slab 	56	59	
Wood floor assembly: <ul style="list-style-type: none"> • 15.9 mm x 89 mm wood ledger strips • Tech 5000 membrane • 38.1 mm concrete topping • insulating fibreboard • 15.9 mm plywood • I-joists • glass fibre insulation • 13 mm resilient metal channels, 406 mm o.c. • 2x15.9 mm Type X gypsum boards 	59	60	
Wood floor assembly: <ul style="list-style-type: none"> • AD-316 adhesive • Tech 7000 membrane • AD-316 adhesive • 203.2 mm concrete slab 	56	60	
Wood floor assembly: <ul style="list-style-type: none"> • 15.9 mm x 89-mm wood ledger strips • Tech 7000 membrane • 38.1 mm concrete topping • insulating fibreboard • 15.9 mm plywood • I-joists • glass fibre insulation • 13 mm resilient metal channels, 406 mm o.c. • 2x15.9 mm Type X gypsum boards 	59	62	

Table 4.1.2.1.2 Test results for “Céramitech” based on ASTM C 627, “Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester”

Elements in Assembly	Test Results	
<ul style="list-style-type: none"> • Polymer-modified hydraulic tile grout • 300 mm x 300 mm ceramic tiles • top adhesive • Céramitech • bottom adhesive • 51 mm concrete slab made of pre-mix concrete 	No damage: 5 first cycles	System breakdown: 7th cycle

“Céramitech” can be used in residential and light-duty commercial applications.

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