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European Technical Assessment ETA 16/0571 of 12/09/2016

Technical Assessment Body issuing the European Technical Assessment	British Board of Agrément
Trade name of the construction product	Tapco Slates
Product family to which the construction product belongs	Product Area 22: Roofing
Manufacturer	Tapco Europe Ltd Unit 32 Tokenspire Business Park Hull Road Woodmansey East Yorkshire HU16 0TB
Manufacturing plant(s)	Tapco Group Inc Metamora Facility 4057 South Oak Street Metamora Michigan 48455 USA
This European Technical Assessment contains	Four pages including one Annex which forms an integral part of the document
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	European Assessment Document 14-22-006-004.02, adopted 30-10-2015

1 Technical description of the product

Tapco Slates are compression-moulded slates made from a blend of recyclable polypropylene, limestone, fillers (including fire retardants) and pigments. Ridge-caps made to the same formulation are also available for use with the slates.

The slates have the nominal characteristics of:

Dimensions (mm)	445 x 305
Nominal thickness (mm)	top edge 7, bottom edge 3.5
Average density (kg·cm^{-3})	1.32
Installed weight (kg·m^{-2})	13.5
Colours	Stone Black, Pewter Grey, Plum, Brick Red, Chestnut Brown, Mist Grey, Brandywine, Red Rock, Olive, Sage Green, Grey/Black blend, Evergreen, Ash Grey, Granite and Graphite.
Finishes	Six embossed pattern finishes are available.

Slight colour variations may exist between batches and the product should be randomised on site to achieve a consistent appearance when installed.

The slates are marked with blind holes for installation.

2 Specification of intended use(s) in accordance with the applicable European Assessment Documents (hereinafter EAD)

The slates are for use as a weatherproof finish to pitched roofs.The image below shows the product installed on a pitched roof.

3 Performance of the product and references to the methods used for its assessment

3.1 Mechanical resistance and stability (BWR 1)

Characteristic	Method	Category
Bending moment	EN 492	See Annex A

3.2 Safety in case of fire (BWR 2)

Characteristic	Method	Classification
External fire performance	Classified to EN 13501-5 : 2005 + A1 : 2009	See Annex A

3.3 Hygiene, health and the environment (BWR 3)

The manufacturer has made a declaration that the product does not contain any dangerous substances.

3.4 Safety and accessibility in use (BWR 4)

Characteristic	Method	Category
Dimensions	EN 492	See Annex A
Density	EN 492	See Annex A
Water absorption	EAD	See Annex A
Dimensional stability	EAD	See Annex A
Warm water immersion at ambient temperature	EN 492	See Annex A
Warm water immersion at elevated temperature	EN 492	See Annex A
Dry heat at elevated temperatures	EN 492	See Annex A
Freeze/thaw cycling	EN 492	See Annex A
UV exposure	EN ISO 4892-3 EN 492	See Annex A See Annex A
Heat-rain cycling	EN 492	See Annex A

3.5 Protection against noise (BWR 5)

Not relevant.

3.6 Energy economy and heat retention (BWR 6)

Not relevant.

3.7 Sustainable use of natural resources (BWR 7)

Not relevant.

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base

According to the Decision 1998/436/EC[1] and amended by Decision 2001/596/EC[2] of 8 January 2001 of the European Commission, the system of assessment and verification of constancy of performance [see Annex V to Regulation (EU) No 305/2011] is as follows:

Product	Intended use	Level or class	System
Roofing Slates	As roof coverings subject to external fire performance regulations	See EN 13501-5 F_{ROOF}	3 4
	As roof coverings subject to regulations on dangerous substances	–	3
	As roof coverings for all other uses	–	4

(1) Official Journal of the European Communities L194 of 10 July 1998.
(2) Official Journal of the European Communities L209 of 2 August 2001.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the Assessment and Verification of Constancy of Performance (AVCP) are laid down in the control document deposited at the British Board of Agrément.

5.1 Tasks of the Assessment Holder

The manufacturer must make a Declaration of Conformity, stating that the construction product is in conformity with the provisions of the European Technical Assessment.

BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

On behalf of the British Board of Agrément

Date of issue: 12 September 2016

John Albon — Head of Approvals Construction Products

Claire Curtis-Thomas
Chief Executive

ANNEX A CATEGORISATION OF LEVELS OF PERFORMANCE OF TAPCO SLATES

This annex applies to Tapco Slates described in the main body of this European Technical Assessment.

The product has the following characteristics as derived from results of tests:

- Dimensions – length 444 mm, width 292 mm and thickness 3.7 mm
- Density – 1.32 kg·cm^{-3}
- Water absorption – 1.32%
- Dimensional change – +0.02 (longitudinal direction) and +0.01 (transverse direction)
- Bending moment – 96 Nm·m^{-1}
- Bending moment after 28 days warm water immersion at ambient temperature – 98 Nm·m^{-1}
- Bending moment after 56 days warm water immersion at ambient temperature – 93 Nm·m^{-1}
- Bending moment after 28 days warm water immersion at elevated temperature – 104 Nm·m^{-1}
- Bending moment after 56 days warm water immersion at elevated temperature – 94 Nm·m^{-1}
- Bending moment after 28 days exposure to dry heat at elevated temperature – 104 Nm·m^{-1}
- Bending moment after 56 days exposure to dry heat at elevated temperature – 92 Nm·m^{-1}
- Bending moment after 100 cycles of freeze/thaw – 94 Nm·m^{-1}
- Bending moment after 1000 hours UV exposure – 102 Nm·m^{-1}
- Bending moment after 2000 hours UV exposure – 98 Nm·m^{-1}
- No visible damage after 25 and 50 cycles of heat/rain.

The product is categorised as having a $B_{ROOF}(t4)$[(1)] level of external fire performance in accordance with the EAD.

(1) The product achieved this classification under EN 13501-5 : 2005 + A1 : 2009 as part of the following systems:

— Tapco Slates mechanically fixed on 18 mm OSB3 board tested at a slope angle of 45°

— Tapco Slates mechanically fixed on a batten and rafter system with a layer of SBS TU-35 underlay, tested at a slope angle of 45°.

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