

THERMAL CLADDING SYSTEMS: TCF

AUSTRALIA'S FIRST ULTRA LIGHT WEIGHT
MULTI-PURPOSE, ONE COAT, SMOOTH FINISH
FIBRE REINFORCED THERMAL RENDER FOR
BOTH INTERIOR AND EXTERIOR USE.

TCS

AT THERMAL CLADDING SOLUTIONS, WE ARE PROUD TO ANNOUNCE THAT NOT ONLY IS OUR SYSTEM TCF THE FIRST OF ITS KIND IN AUSTRALIA, IT IS THE ONLY MULTI-PURPOSE SINGLE-COAT FIBRE REINFORCED SMOOTH RENDER IN THE WORLD AVAILABLE WITH THERMAL INSULATION TECHNOLOGY.

WE WARMLY INVITE YOU TO EXPLORE THIS OUTSTANDING, SUSTAINABLE PRODUCT FOR USE ON YOUR NEXT BUILDING PROJECT

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PRODUCT OVERVIEW

Thermal Cladding System's (TCS) TCF is the Australia's only multi-purpose smooth single coat, fibre reinforced insulation render with a thermal insulation feature.

It is an ultra light-weight (up to 7 times lighter than a conventional plaster), hydrophobic, high crack & corrosion resistant, UV reflective, ready-to-use powder-mix product.

TCF Simply replaces the conventional 3-coat plaster systems. It can be applied up to 25mm thickness at a time, providing substantial cost and labour savings of up to 65% compared to other plaster systems on the market.

This system is 99% inorganic and contains 40% post-consumer recycled content which makes it a true green product. TCF is an A1 non-flammable material, It does not burst into flame or emit any toxic gas when exposed to fire, allows your building to breathe while preventing mold and moisture from occurring.

TCF allows for higher energy-efficiency helping you build sustainable living spaces and saving energy up to 50% in terms of heating and cooling of your buildings.

APPLICATION & PREPARATION

TCF CAN BE QUICKLY AND EASILY APPLIED BY YOUR CHOICE OF
TROWEL OR PLASTER MIXER

AREAS

TCF can be used on new and renovation projects, and applied on various substrates including: OSB, plywood, concrete, cinder blocks, bricks, densglass, drywall, sheetrock, EPS, XPS, plastic, wood and steel structures.

THICKNESS

The minimum thickness over any substrate is 10mm. Some assemblies may require specific minimum thicknesses. TCF can be applied up to 25mm thickness in a single coat.

TEMPERATURE

Application temperature must be between +5 Degrees Celsius and +35 Degrees Celsius. Try to avoid application under extreme wind, cold or direct sunlight conditions.



SURFACE PREPARATION

The application surface must be structurally sound, clean, free of dust, mold, dirt, silicones and paint products. The application surface needs to be smooth and free from defects. Major cracks, holes or voids should be prepared prior to application. The surface shall be wet especially on highly porous and absorbing surfaces or at high temperatures.

FOR BEST RESULTS: ONCE
THE SURFACE AND
MIXTURE HAVE BEEN
CORRECTLY PREPARED,
TCF SHOULD BE APPLIED

Make sure clean equipment for
preparation and mixing is used.

IMPORTANT NOTE: The whole bag
must be used to ensure proper
consistency.

PACKING AND STORAGE

TCF IS AVAILABLE IN 24KG BAGS. THEY ARE DELIVERED IN 40 BAGS PER PALLET, 27 PALLETS PER CONTAINER. THE TCF BAGS SHOULD BE STORED IN A DRY, NON-HUMID ENVIRONMENT, WHERE THE STORAGE SPACE TEMPERATURE IS NO LOWER THAN 5 DEGREES CELSIUS.

01

MIXING

Pour a TCF 24kg bag into a mixing container, followed by 17-18 litres of clean potable water and mix between 5 minutes.

A plastering machine can be used.

Mixing should be done mechanically at a low speed until the mixture reaches a homogenous consistency.

02

COVERAGE

A 24kg bag of TCF covers 20.0m² at 5mm thickness.

Coverage may vary due a number of factors including but not limited to:

- Ambient temperature
- Surface temperature
- Surface porosity
- Mixing methods
- Application methods
- Amount of water
- Wall type
- Metal lath type.

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APPLICATION

Gauge sticks (long, narrow strip of aluminium bars) at desired thickness should be placed on the surface at equal distances to control the thickness and consumption of the material.

Prepared material should be applied between these sticks using a steel trowel or plastering machine then levelled with a straight edge.

Various finishes can be achieved with different techniques, which gives you the flexibility to get creative!

IMPORTANT INFO

HEALTH AND SAFETY

TCF may be an irritant to eyes and skin when exposed. Wear appropriate dust, skin and eye protection. In case of eye contact, flush immediately with water and consult a physician. Wash hands with soap and water after use. Keep out of reach of children. For more information on handling this product refer to its Material Safety Data Sheet (MSDS). The most current MSDS and Product Data Sheet (PDS) can be obtained from TCS.

QUALITY MANAGEMENT

TCS Green Building materials are produced under ISO 9001:2008 and ICC-ES AC108* Quality Standards. The product quality is monitored according to the EN 998-1 by U-STUCCO USA, LLC in the factory laboratories.

WARRANTY

TCS'S TCF is warranted to perform in accordance with the product specification when used pursuant to the application instructions. This warranty is limited to and shall not exceed the total amount paid by the buyer for the product here under. In no event Thermal Cladding Systems PTY LTD shall be liable for any loss of profits, special or consequential damages in respect to any claim.

The foregoing warranties are in lieu of all other warranties express or implied including those concerning suitability for a particular use. This product data sheet has been prepared in good faith on the basis of information available at the time of publication, it is intended to provide users with information about the guidelines for the proper use and application of the covered product(s) under normal environmental and working conditions.

TECHNICAL DATA

COLOUR	OFF WHITE
TEXTURE	SAND & SMOOTH FINISH
BAG WEIGHT	24KG
BAGS PER PALLET/CONTAINER	40/PALLET, 27 PALLETS/
DRY DENSITY	650 KG/m ³
FIRE CLASS	A1/NON-COMBUSTABLE
THERMAL CONDUCTIVITY	TI - 0.09 W/mK
ADHESIVE STRENGTH	≥ 0.45 N/mm ²
CAPILLARY WATER ABSORBSION	60g/M ² /24HR
COMPRESSIVE STRENGTH	CS II ≥ 2.5 N/mm ²
YIELD	8.00m ² @5mm THICKNESS
FIBER TYPE	POLYPROPOPYLENE
SHELF LIFE	12 MONTHS

STANDARDS

ASTM E96/E96M-10	STANDARD TEST METHOD FOR WATER VAPOR TRANSMISSION OF MATERIALS, PROCEDURE A, DESICCANT METHOD	PASS
ASTM C518-10	STANDARD TEST METHOD FOR STEADY-STATE THERMAL TRANSMISSION PROPERTIES BY MEANS OF THE HEAT FLOW METER	PASS
ASTM B117-09	STANDARD PRACTICE FOR OPERATING SALT SPRAY (FOG) APPARATUS	PASS
ASTM E136-12	STANDARD TEST METHOD FOR BEHAVIOR OF MATERIALS IN A VERTICAL TUBE FURNACE AT 750 C DEGREES	PASS
ASTM G21-13	STANDARD PRACTICE FOR DETERMINING RESISTANCE OF SYNTHETIC POLYMERIC MATERIALS TO FUNGI	PASS
EN 13501-1:2007	RESPOND TO FIRE	PASS
EN 1745:2004	HEAT CONDUCTIVITY	PASS
EN 1015-18:2004	WATER VAPOR PERMEABILITY OF HARDENED PLASTER AND MASONRY MORTAR	PASS
EN 1015-18:2004	DETERMINATION OF WATER SUCTION COEFFICIENT DURING CAPILLARY EFFECTS OF HARDENED MORTAR	PASS
EN 1015-12:2000	RESISTANCE TO STICK TO LOWER LAYER OF HARDENED MORTAR	PASS
EN 1015-11:2000	PRESSURE RESISTANCE OF HARDENED MORTAR	PASS
EN 1015-10:2001	DRY POROUS UNIT VOLUME MASS OF HARDENED MORTAR	PASS
EN 1015-3:2000	DETERMINATION OF FRESH MORTAR CONSISTENCY	PASS
EN 998-1:2006	MARKING AND LABELING	PASS
AS 1530.1:1994	METHODS FOR FIRE TESTS ON BUILDING MATERIALS, COMPONENTS AND STRUCTURE	PASS

COVERAGE & CONSUMPTION

THICKNESS	AREA	CONSUMPTION
5mm	20.00 m ² per 24Kg TCX	1.20 Kg/m ²
10mm	10.00 m ² per 24Kg TCX	2.40 Kg/m ²
15mm	6.70 m ² per 24Kg TCX	3.58 Kg/m ²
20mm	4.00 m ² per 24Kg TCX	6.00 Kg/m ²

NOTE:

COVERAGE MAY VARY DUE TO AMBIENT TEMPERATURE, SURFACE TEMPERATURE, SURFACE POROCITY, MIXING METHODS, APPLICATION METHODS, AMOUNT OF WATER, WALL TYPE, METAL LATH TYPE (IF USED).

COMPARISON CHART

	CONVENTIONAL RENDER	EIFS ONE COAT STUCCO	TCS TCX
ONE COAT APPLICATION	X	X	X
SINGLE DAY APPLICATION	X	X	X
LOW LABOUR COST	X	X	X
TROWEL OR SPRAY ON	X	X	X
ULTRA LIGHT WEIGHT	X	X	X
LESS SCAFFOLD EXPENSES	X	X	X
EASY TO APPLY	X	X	X
WATER RESISTANT	X	X	X
CORROSION RESISTANT	X	X	X
VAPOUR PERMABLE	X	X	X
FIREPROOF	X	X	X
THERMAL INSULATION	X	X	X
CONTINUOUS INSULATION	X	X	X
RECYCLED CONTENT	X	X	X
SANDABLE	X	X	X
V.O.C. FREE	X	X	X
U.V. REFLECTIVE	X	X	X
IDEAL FOR RESTORATION	X	X	X
ACOUSTIC INSULATION	X	X	X
LESS FREIGHT EXPENSES	X	X	X
LEED & TITLE 24 COMPLLIANT	X	X	X
GREEN BUILDING MATERIAL	X	X	X

FEATURES & PROPERTIES



**ONE COAT
APPLICATION**



**SINGLE DAY
APPLICATION**



**66% LOWER
LABOR COST**



**TROWEL
OR SPRAY-ON**



**ULTRA
LIGHT-WEIGHT**



**HIGH CRACK
RESISTANT**



**SCRATCH, BROWN
& FINISH COAT**



**LESS SCAFFOLD
EXPENSES**



EASY TO APPLY



**UP TO 5 TIMES
MORE COVERAGE**



**WATER
RESISTANT**



**MOLD
RESISTANT**



**CORROSION
RESISTANT**



**VAPOR
PERMEABLE**



FIREPROOF



R 1.6 / INCH



**THERMAL
INSULATION**



**CONTINUOUS
INSULATION**



**CALIFORNIA
TITLE 24 COMPLIANT**



**GREEN BUILDING
MATERIAL**



**SUITABLE
FOR PRECAST**



SANDABLE



V.O.C. FREE



**20% RECYCLED
CONTENT**



**LEED
FRIENDLY**



**U.V.
REFLECTIVE**



**IDEAL FOR
RESTORATION**



**DIRECT APPLICATION
ON VARIOUS SUBSTRATES**



**ACOUSTIC
INSULATION**



**LESS FREIGHT
EXPENSES**

CONTACT US

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