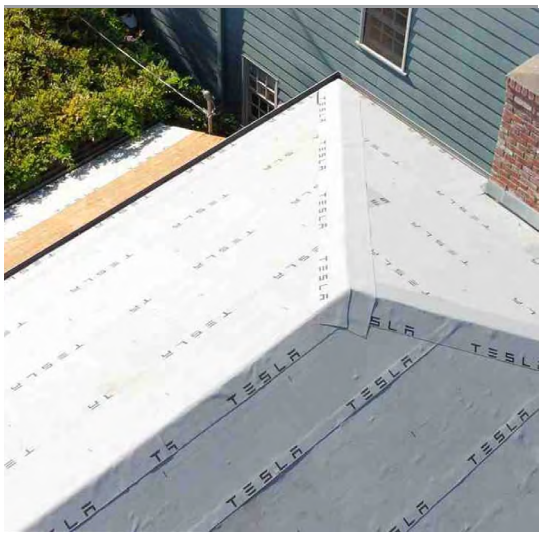
FT COBALT FR TECHNICAL DATASHEET

PRODUCT SUMMARY

COBALT FR is a self-adhering peel and stick roofing underlayment designed for sloped roof applications to help protect against water infiltration from ice dams and wind-driven rain. It is installed with Solar Roof V3 as a single layer application.



CERTIFICATIONS

ASTM D1970/ICC AC48

ICC AC188

ASTM E108 Class -A

PRODUCT CHARACTERISTICS

Color	Gray with Black Line Marks and Tesla Logo
Thickness	51 mils (1.3mm)
Membrane Weight	0.32 lbs/sqft
Roll Weight (w/Release Film)	71 lbs (32 kg)
Roll Coverage (Gross)	38” W x 68’ L = 215.33 sqft/roll
Roll Coverage (Net)	35” W x 68’ L = 198.33 sqft/roll
Surface	Textured Non-Woven Polypropylene
Maximum Full Exposure	6 Months
Minimum Install Temperature	-4°F (-20°C)
Maximum Install Temperature	194°F (90°C)
Primer	Not Required
In-Service Temperature Range	-40°F to 240°F (-40°C to 115°C)
Warranty	25 Years
Release Liner	Double-Sided Silicon Treated Split Polyethylene
Adhesive Technology	Synthetic (Asphalt Free)
EPDM and TPO Compatibility	Yes
Codes Approvals	ASTM D1970, ICC AC48, ICC AC188 ASTM E108 Class-A

ASTM D1970 SPECIFICATION REPORT

TEST PERFORMED	REQUIREMENT	FT COBALT FR RESULTS
Underlayment Unrolling	No Cracking or Sticking @ 40°F (4.4°C) and 140°F (60°C)	Pass
Thickness	Min 1.0 mm (40 mils)	40 mils (1.0mm)
Tensile Strength MD	Min 25 lbf/in-width	148 lbf/in-width
Adhesive Elongation MD	Min 10%	106%
Tensile Strength CD	Min 25 lb/in-width	143 lbf/in-width
Adhesive Elongation CD	Min 10%	84%
Adhesion to Plywood at 4.4°C (40°F)	Min 2.0 lbf/ft-width	101 lbf/ft-width
Adhesion to Plywood at 23.9°C (75 F)	Min 12.0 lbf/ft-width	79.6 lbf/ft-width
Thermal Stability Max Displacement	Max 3mm (0.1 in)	0mm
Flexibility at -29°C (-20°F)	No Cracking and No Leak (head of water)	Pass
Tear Strength MD	Min 20 lbf	759 lbf
Tear Strength CD	Min 20 lbf	686 lbf
Moisture Vapor Permanence, Max	Max 0.1 U.S. Perm	0.07 perm Class I - Vapor Retarder
Nail Sealability	No Leaking	Pass
Waterproof Integrity of Lap Seam	No Leaking	Pass

ICC AC188 SUMMARY REPORT

TEST PERFORMED	REQUIREMENT	FT COBALT FR RESULTS
Pliability ASTM D146 Section 14	Shall see no cracking when bent 90˚degrees at a uniform speed over a rounded corner of 1/2- inch radius.	Pass
Accelerated Aging AC48 Section 4.7	Shall see no visible damage to the specimens such as cracking, chipping or defamation shall occur.	Pass
UV Exposure AC48 Section 4.8	Shall see no visible surface or structural changes such as peeling, chipping, cracking, flaking or pitting shall occur when observed under a minimum of five power magnification.	Pass
Tensile Strength AC48 Section 4.1, 4.7, 4.8 & ASTM D1970	Control, accelerated-age, and ultraviolet samples shall have a minimum breaking strength of 25 lbf/in width for both machine and cross-directions.	Pass
Adhesion AC48, Section 4.5, 4.7 & 4.8	Conditioned specimens shall exceed 75% of the value determined for the control specimens, for each substrate (plywood and OSB).	Pass
Liquid Water Transmission ASTM D4869 Section 8.3.5	Shall meet the “Pass” requirements of Section 8.6 of ASTM D4869-2015 or Section 8.3.5 of ASTM D4869-2005 (2011) e01, ASTM D4869-2004. No sign of water wetness.	Pass
Cycling and Elongation AC48, Section 4.6	No cracking of the material or bond failure between the product and the plywood substrate.	Pass
Unrollablity AC188 Section 3.2	Shall not crack or become so sticky as to cause tearing or other damage, upon being unrolled at temperatures between 50˚ F and 140˚F (10˚C and 60˚C)	Pass

REFERENCES & EVALUATION REPORTS

Code Compliance Research Report CCRR-0386

FT Synthetics 104301857COQ-005A Final Report

Cobalt-FR.ASTM D1970Final Report

PEV Tesla one layer FT Syn Cobalt FR S-A G104364195MID-001 mb