

ASTROFLEX 4000 SUPRA

Compound
SBS

Cold Flexibility
-20°C

CHARACTERISTICS

ASTROFLEX 4000 SUPRA is a waterproofing membrane made of distilled bitumen modified with SBS (styrene-butadiene-styrene) polymers. The high grade elastomeric compound ensures great elasticity, ease of application and superior bonding and tightness of all joints and overlaps.
ASTROFLEX 4000 SUPRA is ideally suited for systems where waterproofing layers are subject to structural solicitations and where superior ageing resistance and flexibility at low temperatures are required.

CARRIER

The carrier is a tough isotropic and rot-proof spunbond polyester carrier, reinforced and stabilised with longitudinal glass yarns that provide superior dimensional stability and reduce to an absolute minimum the risk of shrinkages caused in time by weathering and by swift thermal excursions.

INTENDED USE ACCORDING "CE" MARK STANDARDS

Underlay or intermediate layer in multi-layer systems for roof waterproofing (EN 13707)	ASTROFLEX 4000 SUPRA
Vapour diffusing/equalizing base sheet for partially bonded roofing applications (EN 13707)	ASTROFLEX 4000 SUPRA V.E.B.S.
Underlay or intermediate layer in multi-layer systems for roof waterproofing (EN 13707) – Vapor control layer for multi-layer waterproofing systems (EN 13970)	ASTROFLEX 4000 SUPRA V.C.L.

CERTIFICATION

The composite roofing system including ASTROFLEX 4000 SUPRA as underlay and ASTROFLEX 5000 SUPRA as top layer has been tested and classified in category "EXT. F.AA", in accordance with British Standard BS 476 Part 3:2004 "External Fire Exposure Roof Tests" (Report n°336035). ASTROFLEX 4000 SUPRA also meets the provisions regarding product documentation given in Norwegian Building Regulations for bituminous waterproofing membranes, including properties related to external fire (B_{roof}(t₂) classification). Characteristics, fields of application and conditions are stated in Technical Approval n°20283 (double-layer system) issued by SINTEF Certification.

AVAILABLE SURFACE FINISHES

Standard "torch-on" underlay version:

Upper surface: fine sand.

Lower surface: glossy polypropylene fast burning "torch-on" film.

"Vapour Equalizing Base Sheet" V.E.B.S. version:

Upper surface: sand.

Lower surface: almost the 40% of the lower face is coated in relief with **THERMO-ADHESIVE STRIPS**, formed by a special "hot melt" bituminous compound on the basis of elastomers and tackifying resins. The strips are activated by light torching: the immediate adhesion to the substrate grants an easy and homogeneous "partially bonded" application upon the insulation board. This kind of application, in fact, promotes the diffusion of water vapour coming from the substrates, avoiding the formation of bubbles; the distribution of mechanical stresses and structural movements is also ensured.

In any case, side and head overlaps of Vapour Equalizing layer should be made by means of normal torching; the same for the "fully-bonded" application of a cap sheet layer of self-protected bituminous membrane (Astroflex Supra 5000 or 6000).

"Vapour Control Layer" V.C.L. version:

Upper surface: coated in relief with **THERMO-ADHESIVE STRIPS** (about 40% of the surface), of the same composition described above. Activated by light torching, the strips make very fast and easy the application of approved insulation board, without the use of oxidized bitumen, mechanical fasteners or other kind of adhesives. Side and head overlaps of Vapour Control Layer should be made by means of normal torching.

Lower surface: polyethylene fast burning "torch-on" film.

USE & APPLICATION

ASTROFLEX 4000 SUPRA is recommended as underlay in multi-layer waterproofing systems, particularly suitable for use on the following: prefabricated concrete structures – concrete and brick structures – wooden roofs – sheet metal structures – tension structures.

ASTROFLEX 4000 SUPRA V.E.B.S. is ideally suited as base sheet in multi-layer waterproofing system for partially bonded application upon approved insulation boards, avoiding the use of additional layers or perforated separating membranes.

ASTROFLEX 4000 SUPRA V.C.L. is recommended as thermo-adhesive substrate below the insulation board, preventing the insulation layer from coming in contact with sources of humidity and preserving in time its function and properties.

In order to maintain unchanged the properties of the Thermo-Adhesive Strips, is recommended to follow these basic rules:

- rolls must be stored in sheltered premises away from direct sunlight and/or frost. Pallets must not be double-stacked;
- product shall be applied at ambient temperatures above + 5°C;
- the receiving surface shall be prepared clean from debris, dust or loose particles, duly primed to ensure maximum bonding to the substrate;
- slightly torch-on the fine protective film on strip-covered surface (adhesive strips become shiny and start to melt);
- the use of mechanical fixations shall be provided in applications with a pitch of 15% or more, as normally recommended for exposed waterproofing sheets applied on vertical surfaces.

For correct installation refer to information provided by Copernit Technical Department.

Properties	Test Method	Unit	ASTROFLEX 4000 SUPRA TORCH-ON	ASTROFLEX 4000 SUPRA V.E.B.S.	ASTROFLEX 4000 SUPRA V.C.L.	Tol.
Length	EN 1848-1	m	8 (-1%)	8 (-1%)	8 (-1%)	≥
Width	EN 1848-1	m	1,0 (-1%)	1,0 (-1%)	1,0 (-1%)	≥
Straightness	EN 1848-1	mm	16 mm X 8 m	16 mm X 8 m	16 mm X 8 m	max
Unit weight	EN 1849-1	kg/m ²	4,0	4,5	4,5	±10%
Nominal thickness	EN 1849-1	mm	3,0	4,0*	4,0*	±10%
Tensile strength (at break) L/T	EN 12311-1	N/5 cm	500/450	500/450	500/450	≥
Elongation (at break) L/T	EN 12311-1	%	30/30	30/30	30/30	≥
Tear resistance (nail test) L/T	EN 12310-1	N	150/200	150/200	150/200	≥
Resistance to static loading	EN 12730 (A)	kg	15	15	15	≥
Impact resistance	EN 12691	mm	800	800	800	≥
Dimensional stability	EN 1107-1	%	±0,3	±0,3	±0,3	≤
Flexibility at low temperature	EN 1109	°C	-20	-20	-20	≤
Flow resistance at elevated temperature	EN 1110	°C	100	100	100	≥
Watertightness (method A)	EN 1928	kPa	60	60	60	≥
Resistance to water vapor diffusion (μ)	EN 1931	--	20.000	20.000	20.000	--
Reaction to fire	EN 13501-1	Class	E	E	E	--
External fire exposure roof test	BS 476 Part 3	Class	EXT.F.AA ⁺	EXT.F.AA ⁺	EXT.F.AA ⁺	--

(*) thickness measured on thermo-adhesive strips

(+) system related performance referred to the composite roofing system including ASTROFLEX 4000 SUPRA as underlay and ASTROFLEX 5000 SUPRA as top layer.