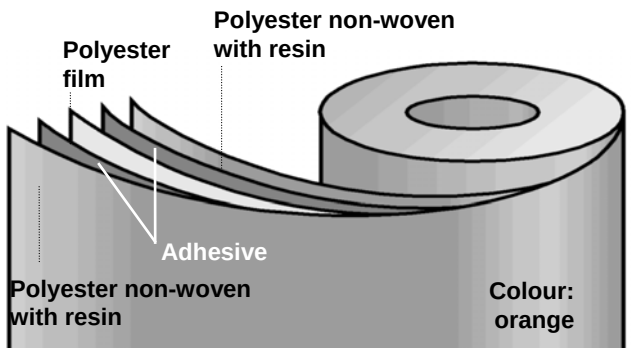
EVITHERM SG:
For Thermal Class 155.

Composition and properties.

EVITHERM SG is a KREMPEL triple-layer insulation made from polyester film with polyester non-woven overlay on both sides (as with TRIVOLTHERM P) and with a cured yellow resin impregnation on both sides. For use in Thermal Class 155.

EVITHERM SG has a high dielectric strength and a high mechanical stability. The surface of the material is smooth and it can be easily processed in automated insulation machines (no resin abrasion). In spite of the smooth surface, impregnating resins bond very well with EVITHERM SG. Thanks to this remarkable combination of properties EVITHERM SG has been successfully used for many years in the construction of standard motors.

Composition of EVITHERM SG



With EVITHERM SG, the sensitive polyester film is protected at high temperatures against the damaging effects of oxidation and hydrolysis as well as mechanical damage, not only by the two non-woven layers but also the impregnating resin. The impregnating resin specially developed by us has already been **fully cured** in the non-woven and is therefore particularly resistant to impregnating agents and solvents. The subsequent securing of the windings using immersion, drip or vacuum impregnation poses no problems when using EVITHERM SG.

Over the course of time specific standard types have been created, whereby we are able to achieve the varying overall thicknesses of EVITHERM SG by using different thicknesses of polyester film inserts whilst the external layers (non-woven and resin) always remain the same at approx. 55 µm per side (except for: 0.09 mm thickness). The precise composition of the material is described in more detail by way of combinations of letters and figures. Please see our current price lists for the minimum purchase quantities for EVITHERM SG standard types.

Standard types EVITHERM SG

Standard types	Non-woven + resin thickness
EVITHERM SG	approx. 55 µm, both sides

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Designations

EVITHERM SG 0.00

Triple-layer material
PET non-woven+PET film+PET non-woven
with resin impregnation on both sides

Overall thickness in mm

e.g. EVITHERM SG 0.30

Triple-layer material
PET non-woven+PET film+PET non-woven
with resin impregnation on both sides

Overall thickness 0.30 mm

Technical data EVITHERM SG.

Dimensions and formats EVITHERM SG

Type	Nominal thickness	Tolerance	Film thickness	Area weight	Tolerance	Area utilization approx.	Standard core	Standard widths master reels
	mm	± %	µm	g/m²	± %	m²/kg	mm	approx. mm
EVITHERM SG 0.09	0.09	15	23	100	12	10.0	70	on request
EVITHERM SG 0.15	0.15	15	50	160	12	6.3	70	1600 or 800
EVITHERM SG 0.20	0.20	15	100	240	12	4.2	70	1600 or 800
EVITHERM SG 0.23	0.23	15	125	270	12	3.7	70	1600 or 800
EVITHERM SG 0.30	0.30	15	190	370	12	2.7	70	1600 or 800
EVITHERM SG 0.35	0.35	10	250	445	12	2.2	70	1600 or 800
EVITHERM SG 0.45	0.45	10	350	570	12	1.8	70	1600 or 800

Characteristic values EVITHERM SG

Type	Nominal thickness	Tensile strength longitudinal	Tensile strength transverse	Elongation longitudinal	Elongation transverse	Dielectric strength	Shrinkage longitudinal	Shrinkage transverse	Moisture content
	mm	N/10mm	N/10mm	%	%	kV	%	%	approx. %
EVITHERM SG 0.09	0.09	≥ 55	≥ 35	≥ 12	≥ 20	≥ 4	≤ 1.5	≤ 1.5	0.5
EVITHERM SG 0.15	0.15	≥ 120	≥ 90	≥ 20	≥ 30	≥ 6	≤ 1.5	≤ 1.5	0.5
EVITHERM SG 0.20	0.20	≥ 180	≥ 200	≥ 20	≥ 35	≥ 10	≤ 1.5	≤ 1.5	0.5
EVITHERM SG 0.23	0.23	≥ 200	≥ 250	≥ 20	≥ 50	≥ 12	≤ 2	≤ 2	0.5
EVITHERM SG 0.30	0.30	≥ 300	≥ 350	≥ 30	≥ 50	≥ 16	≤ 2	≤ 2	0.5
EVITHERM SG 0.35	0.35	≥ 350	≥ 400	≥ 30	≥ 50	≥ 19	≤ 2	≤ 2	0.5
EVITHERM SG 0.45	0.45	≥ 450	≥ 450	≥ 30	≥ 50	≥ 22	≤ 2	≤ 2	0.5

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