



SWYFT Composite

Technical Data Sheet — Self-Reinforced Polypropylene (SRPP)

Product: Polypropylene / Polypropylene Thermoformable Composite & Foam-Core Sandwich

SWYFT Composite (SRPP) is a self-reinforced polypropylene material offering an outstanding strength-to-weight ratio, excellent impact resistance, and full recyclability. Available as solid sheets and as a lightweight foam-core sandwich. All grades are chlorine-free and laser-safe. The core material is SRPP. All technical values shown below are factory data.

Technical Properties — Standard Grades

Technical Properties	1.75 mm Solid	3 mm Solid	6 mm Foam Core	Unit
Thickness	1.75	3.0	6.0	mm
Density	0.92	0.92	0.51	g/cm ³
Areal Weight (approx.)	1 610	2 677	3 060	g/m ²
Tensile Modulus (MD/CD)	3 500	3 200	3 200	N/mm ²
Tensile Strength (MD/CD)	160	140	140	N/mm ²
Tensile Strain to Failure	16	15	15	%
Flexural Modulus (flat-wise)	3 600	3 200	3 400	N/mm ²
Flexural Strength (flat-wise)	70	67	70	N/mm ²
Compression Strength (flat)	—	—	3 000	MPa
Charpy Impact (23 °C, 5 J)	n.b.	120 (partial)	—	kJ/m ²
Izod Impact (23 °C, notched)	70	107	—	J/m

n.b. = no break. All values are factory data.

Laser Cutting Starting Settings

Starting values for CO2 laser cutting. Tune power and speed for the specific machine, lens, and assist gas. Fully compatible with CO2 laser cutting— no toxic chlorine-related by-products.

Material	Power	100 W Speed	130 W Speed
SWYFT Composite / SRPP (1.75 mm)	50–65%	15–25	20–32
SWYFT Composite / SRPP (3 mm)	55–70%	11–18	14–23
SWYFT Composite foam core (6 mm)	60–75%	8–14	10–18

Speed units: mm/s (typical). Always run a test cut before production.

Material Composition & Processing Notes

Solid sheets: Self-reinforced polypropylene (SRPP) — continuous polypropylene tapes embedded in a polypropylene matrix.

Foam core (6 mm): SRPP core material (lightweight foamed structure). Same base polypropylene chemistry as the solid sheets.

Laser processing: Fully compatible with CO2 laser cutting. No toxic chlorine-related by-products.