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Factory-direct manufacturer · Cleanroom production · Die-cut & laser conversion · Samples & quotation in 24 hours · Test reports on request

PRODUCT DESCRIPTION

SK, SC and DC are the **general-purpose WESTRU[®] PDMS (silicone gel) film series** — optically clear, solvent-free silicone elastomer films produced in a cleanroom and delivered as a four-layer laminate. The three grades share identical chemistry, optical behaviour, electrical performance and temperature range; they are **distinguished mainly by hardness and elastic modulus**, so you can specify the stiffness you need without trading off anything else.

- SK** — softest and most elastic; conforms to uneven surfaces
- SC** — balanced hardness; the all-round choice for most applications
- DC** — highest strength and modulus; widest size and thickness range

FILM STRUCTURE

1 · Protective film layer	soft
2 · PDMS film layer	elastic, recoverable
3 · Polyester substrate	rigid carrier
4 · Polyester substrate protective layer	soft

Protective films on both faces — peel them off before use. The stated thickness is the PDMS film only and excludes the protective films.

Property	SK	SC	DC
Shore A hardness	30	42	50
Tensile strength (MPa)	4.0	4.2	6.5
Elongation at break (%)	220	180	120
Elastic modulus (MPa)	0.4	0.6	1.6

Optical & physical · Electrical & biological			
Oxygen permeability (SK, 50 µm)	≈ 596 L O ₂ per m ² per day — 596,449 cm ³ /(m ² ·24 h·0.1 MPa), report (2024)QSWJ04149	Dielectric strength	20 kV/mm
Light transmittance	94% at 2 mm	Dielectric constant (100 kHz)	2.7
Refractive index	1.41	Dissipation factor (100 kHz)	0.001
Density	1.02 g/cm ³	Volume resistivity	10 ¹⁵ Ω·cm
Operating temperature	−45 °C to +200 °C	Surface character	Hydrophobic, low surface energy
Composition	Pure PDMS, solvent-free	Cytotoxicity	Non-toxic — ISO 10993-5

THICKNESS, SIZE & ROLL

Stock thickness	20 / 50 / 100 / 125 / 150 / 200 / 250 / 300 / 400 / 500 / 600 µm
Thickness above 600 µm	DC: 1 / 2 / 3 / 4 / 5 mm · SK: 1 mm, 2 mm · other grades to order
Other thicknesses	Made to order, down to 10 µm
Sheet size	200 × 150 mm (7.8 × 5.9 in) or 200 × 300 mm (7.8 × 11.8 in)
Sheet size, 1 mm and above	100 × 100 mm
Roll	Standard width 300 mm; up to 500 mm custom
Conversion	Die-cutting and laser cutting to your drawing and tolerance

TYPICAL APPLICATIONS

- Microfluidics & lab-on-chip — soft channels, valves and chips
- Flexible electronics and stretchable substrates
- Gas-permeable membranes — cell culture, oxygenation, venting
- Soft-lithography stamps, 2D material transfer, release films
- Packaging, cushioning, wafer & die protection, seals and gaskets
- Dielectric & EAP layers — actuators, sensors, flexible circuits

Tell us your application — we will recommend the grade and send a sample.

Handling thin films: keep the film on its rigid carrier during handling, positioning and application, and peel it off only when the operation is finished — once separated, thin film can self-adhere or curl like cling film.

Test · Report No.			
RoHS — SGS	SHAPH23021734201	ISO 10993-5 Cytotoxicity	SDWH-M202400989-1
ISO 10993-10 Sensitization	M26C0323-01N / -02N	ISO 10993-23 Irritation	M26C0323-03N / -04N
Oxygen transmission	GB/T 1038.1-2022 · (2024)QSWJ04149	Full reports	Available on request

Issued by SGS and Sudatest (Soochow University Institute of Health and Environmental Technology).

Technical data are typical values and are **not guaranteed specifications**. Anything outside the stock range is made to order — send us your drawing or application and we will quote within 24 hours. A printed handling card ships with every order.