EKOTINA

High-Performance Silicone-Based Upholstery Material
Designed for Demanding Environments.

www.ekotina.com

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About Ekotina

Ekotina is an application-focused supplier of high-performance silicone-based upholstery material. We work with designers, manufacturers and project teams to identify suitable material solutions for a wide range of commercial and specialist environments.

01 APPLICATION-LED

We begin by understanding the application, operating environment, performance priorities and design requirements. This allows us to recommend materials around real project needs—not simply color, texture or an existing catalogue.

02 SPECIALIZED EXPERTISE

We bring together specialized capabilities in material formulation, surface development, backing construction and production, enabling us to respond effectively to a wide range of technical, design and project requirements.

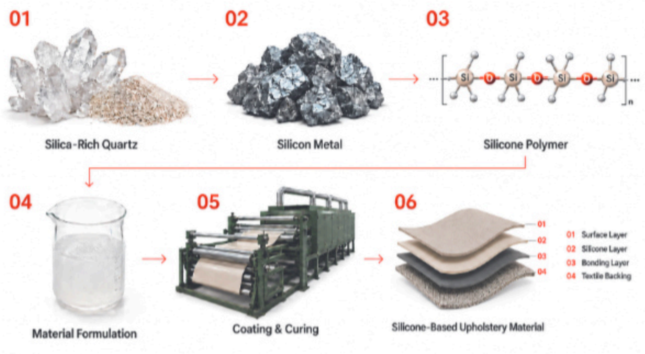
03 ONE POINT OF CONTACT

Ekotina coordinates material selection, sampling, testing requirements, production follow-up and delivery communication through one consistent point of contact—helping customers move from initial enquiry to the right material solution with greater clarity and efficiency.

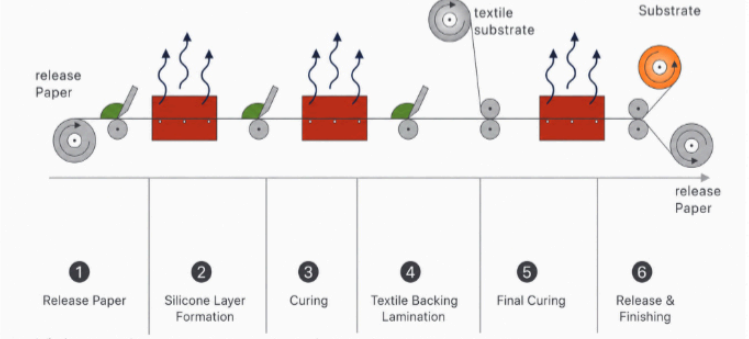
Understanding the Material

01 FROM QUARTZ TO AN ENGINEERED SURFACE

Silicone begins with silicon obtained from silica-rich quartz. It is transformed into silicone polymers, then formulated, coated and cured onto a textile backing to create the finished material.



02 HOW THE MATERIAL IS MADE



Simplified process shown. Layer construction and processing sequence may vary according to material specification and manufacturing reguirements.

Performance Areas & Reference Standards

Selected materials have demonstrated performance across the five areas below through manufacturing-partner testing and customer projects.
Results vary by material specification.

01 PHYSICAL PERFORMANCE

Wyzenbeek Abrasion, 200,000+ double rubs
Martindale Abrasion, 120,000 cycles
Taber Abrasion :up to 4000 cycles

02 COLORFASTNESS

Light Fastness-AATCC 16.3:200h, Grade 4.5
Crocking-AATCC8, Wet & Dry, Class 5
Perspiration-AATCC 15, Class 5

03 AGING RESISTANCE

UV stability-ASTM D4329-05 (QUV),1500+hours
Salt spray resistance - ASTM B117, 1000+hours
Hydrolysis resistance - ASTM D3690-02, 14+wecks
Low-temp fex resistance - ISO17694,-30°C
Cold Crack Resistance — CFFA-6, 5 lb Roller

04 BIOCOMPATIBILITY

In vitro cytotoxicity: ISO10993-5:2009 level 1
Skin sensitization:ISO10993-10:2010 level 0
Skin irritation: ISO10993-10:2010 level 0

05 FLAME RESISTANCE

California TB 117-2013 — Upholstered Furniture
ASTM E84 (Adhered) — Interior Finish Materials
FMVSS 302 — Vehicle Interior Materials
IMO 2010 FTP Code, Part 8 — Upholstered Furniture
NFPA 260, Class I — Upholstered Furniture Components
UFAC, Class I — Residential Upholstery Fabrics
EN 1021, Parts 1 & 2 — Upholstered Furniture

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Comparison of Upholstery Material Types

	Silicone-Based Upholstery Material	Genuine Leather	PU Leather	PVC Leather
Coating Material	Silicone Coating System	PU Dispersion (PUD), Acrylic	PU Resin	PVC Resin
Substrate	Knitted/Woven/ Nonwoven Fabrics	Hide, Calfskin, Sheepskin	Knitted/Woven/ Nonwoven	Knitted/Woven/ Nonwoven Fabrics
Process	Dry Coating	Tanning & Finishing	Wet or Dry Coating	Calendering or Coating
Chemical & Emission Profile	Ultra-Low VOC & Low Odor	Tanning & Finishing Chemicals	Solvents & Additives May Vary	Plasticizers & Additives May Vary
Service Life	10–15 Years	5–10 Years	2–5 Years	2–10 Years
Touch & Flexibility	Excellent	Excellent	Moderate	Inferior
Stain Resistance	Excellent	Poor	Poor	Poor
Corrosion Resistance (Salt Spray)	Excellent	Inferior	Poor	Moderate
Temperature Resistance	Stable from -40°C to 200°C	Moderate	Limited at High Temperatures	Limited at Low Temperatures
Flame Retardancy	Inherently Flame-Resistant	Varies by Treatment	Requires FR Formulation	Requires FR Formulation
Toxicity Under Combustion	No Toxic Gases Detected	Nitrogen-Containing Gases	Hydrogen Cyanide & Hazardous Gases	Hydrogen Chloride & Toxic Emissions
Water Resistance	Excellent	Moderate	Poor	Fair
Compliance Potential	High Compatibility (REACH, RoHS, etc.)	Depends on Tanning & Finishing	Depends on Formulation & Additives	Depends on Formulation & Additives
Typical Applications	Healthcare, hospitality, marine, outdoor & commercial seating	Luxury interiors, automotive & premium furniture	Residential, hospitality & general commercial interiors	Public seating, healthcare & cost-sensitive applications

Indicative comparison; performance may vary by form ulation, backing, construction and test conditions.

Applications of Silicone-Based Upholstery Material

One Material. Multiple Environments.

Application Overview

Marine & Yacht

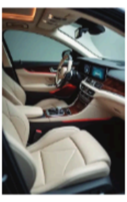
UV & Saltwater Resistant
Wide Temperature Tolerance
Mold & Stain Resistant
Easy to Clean & Slip Resistant
Durability & Longevity

Outdoor Furniture & Upholstery

UV & Weather Resistant
Water & Stain Resistant
Durable & Easy to Clean
Soft Touch & Design Flexibility

Commercial Interiors

High-Traffic Durability
Flame-Retardant Options
Stain Resistant & Easy to Clean
Antibacterial & Mold Resistant
Colorfast & Customizable

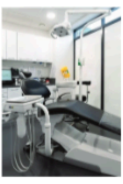


Automotive Interiors

UV & Heat Resistant
Ultra-Low VOC & Low Odor
Abrasion & Scratch Resistant
Easy to Clean & Color Stable
Flame-Retardant Options

Baby Products

Ultra-Low VOC & Low Odor
Skin-Friendly Material Options
Durable & Tear Resistant
Stain Resistant & Easy to Clean
Antibacterial & Mold Resistant



Medical Equipment

Antibacterial & Mildew Resistant
Resistant to Disinfectants
Water Resistant & Easy to Clean
Durability & FR Options

Engineered for performance and aesthetics across diverse applications.

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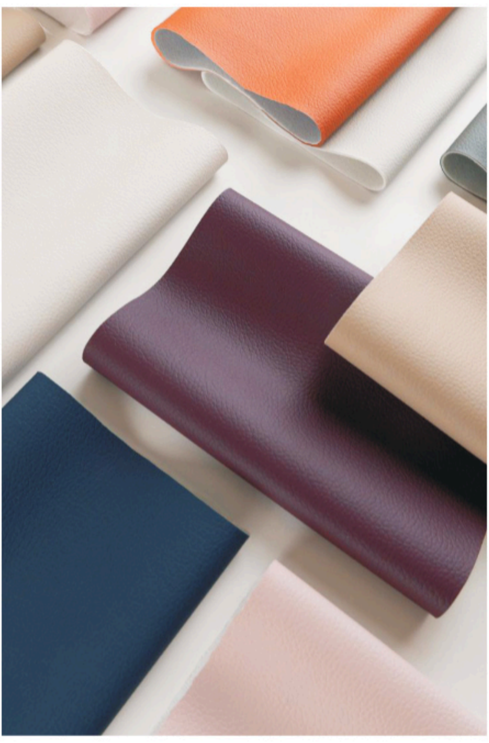

Let's Talk About Your Project.
Material selection, samples and project-specific support

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