

DESIGN + PERFORMANCE

SUNBRELLA UPHOLSTERY
TEXTILE GUIDE

MADE IN



FRANCE

Discover the **French expertise**
and **unique textile innovations**
of market-leader **Sunbrella®**

Sunbrella Europe collections are designed and manufactured at the Dickson Constant factory in Wasquehal, France.



CONTENTS

RAW MATERIAL AND SPINNING PROCESS

PRODUCTION PROCESS

PERFORMANCE

TESTING AND STANDARDS

WARRANTY

ENVIRONMENT

CERTIFICATION

CLEANING OUR PRODUCTS

ASSEMBLY ADVICE





**RAW MATERIAL
AND SPINNING PROCESS**

SOLUTION-DYED ACRYLIC YARN

Thanks to Sunbrella solution-dyed acrylic, our high-performance fabrics are dyed all the way through.

The yarn is saturated with UV-stabilized pigments during production and then spun to produce a fully dyed yarn.

Our yarn is like a carrot, the same color on the inside as it is on the outside. Yarn-dyed thread, in contrast, is like a radish, with the color remaining on the surface.

Sunbrella colors resist years of exposure to sun and light.



UV/FADE
RESISTANT

Piece-dyed

white yarn woven into fabric and then dyed (radish).

Yarn-dyed

white fibers spun into yarn and then dyed (radish).



GREENOVATION

We are committed to the environment:

We use 100% dye-free and 100% solvent-free yarn

We recycle our pallets (6,500 pallets per year) and dividers (100 tons per year)

Our fibers are recycled for use as industrial filters, automotive felt, insulation, and outdoor carpeting

Solution-dyed acrylic also saves water

COLORFAST

**ORIGINAL
CONDITION**

**AFTER 1,000
HOURS**
1 year of sunshine
in the South of
France

**AFTER 2,000
HOURS**
2 years of sunshine
in the South of
France

**AFTER 4,000
HOURS**
4 years of sunshine
in the South of
France

YARN-DYED
POLYESTER



YARN-DYED
ACRYLIC



POLYPROPYLENE
OLEFIN



SUNBRELLA SOLUTION-
DYED
ACRYLIC





PRODUCTION PROCESS

WARPING

Warping is when yarns are aligned side by side lengthwise to make a chain.

There are three types of warper:

DIRECT WARPERS

for large runs of solid and classic-striped fabrics
Speed 700 to 1,000 m/min

SECTIONAL WARPERS

for short runs of fabrics with sophisticated patterns and complex stripes
Speed approx. 600 m/min

SAMPLING WARPERS

for small runs with a small number of bobbins for warp beams from 10 to 200 m. We mainly use this type of warper in our design and R&D department.



GREENOVATION

We recycle the plastic films used to protect pallets
(7 tons per year)

Our empty cardboard cones
(25 tons per year)
and cardboard edge guards
(10 tons per year)
are also recycled

WEAVING

Weaving is the interlacing of threads that run along the length of the yardage (warp threads) and threads drawn through the warp (weft threads).

RAPIER AND AIR-JET LOOMS

For solid or regular fabrics.

JACQUARD LOOMS

For complex patterns.

To prevent fabric from fraying, a selvedge is woven on each side of the fabric width. When the loom is adjusted, we initially weave one meter of fabric to check its quality, density, and design conformity.

This allows us to monitor the quality of the fabric weave and color conformity.



GREENOVATION

We recycle selvedge yarn
(60 tons per year)

Our yarn bobbin pallet
packaging films
are also recycled
(3 tons per year)



WEAVE TYPES

PLAIN WEAVE


The simplest and most resistant weave. Each thread of the warp is interlaced with weft thread. Plain weave has no front or back.

REGULAR NATTÉ WEAVE

A variation of plain weave in which two or more warp and weft threads are woven side by side.

JACQUARD WEAVE

Complex and multi-colored Jacquard patterns require a special loom to control individual warps. Jacquard fabrics are often used for upholstery and interior design.



EXAMPLE OF SJA CHARRON 3944 SOLID PLAIN WEAVE



EXAMPLE OF SJA CHARRON 3944 SOLID REGULAR NATTÉ WEAVE



EXAMPLE OF KOMO COJA J346 JACQUARD WEAVE

TREATMENT

The fabric is cleaned prior to treatment in order to remove waste material by brushing and then washing it in two wash tanks: one hot wash tank and one cold rinse tank.

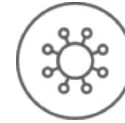
The fabric is then transferred to a treatment bath where it is compressed between two rollers to ensure the right amount of product reaches all the way through the fabric. This treatment makes the fabric water repellent and stain and mold resistant. All fabrics are checked in the laboratory after treatment.



STAIN
RESISTANT



EASY
TO CLEAN



ROT
RESISTANT



BREATHABLE



WATER
REPELLENT



GREENOVATION

No chemical products are released into the environment. They are recycled or destroyed by an accredited organization (approx. 30 tons per year)

We filter and reuse our wash water and regularly reduce our water consumption

We check our waste water daily



INSPECTION

An inspector visually inspects each meter of fabric.
Some fabrics are pre-inspected by camera.

Defects are entered into a computer and stickers
(defect marks) placed on the fabric.



GREENOVATION

Fabrics are cut ultrasonically
to the required width

98.5% of our fabrics do not have
defects
and do not produce poor-
quality waste

PACKAGING

A master piece measuring several thousand linear meters is cut into saleable rolls. Each length of fabric is then rolled around a cardboard tube. The roll is wrapped in stretch film and then placed in a polyethylene bag for storage and transport.

The roll is then labelled with the following information: weight, meterage, registration number, product name, and the location of any defects.



GREENOVATION

We only use recycled
plastic packaging
(15 tons per year)

STORAGE

Rolls are carefully arranged in the storage area, one color per bin. The location of each roll is entered into our database.

We are able to deliver each order within 24 hours by storing fabrics in sufficient quantities and using local affiliate storage facilities.



DISPATCH

All fabric stocks are entered into our database.

For each order, stock keepers use a barcode scanner to identify and enter items for dispatch.



GREENOVATION

We reuse our yarn pallets to
prepare orders for our
customers

We recycle our
plastic packaging
(around 2 tons per year)

We have an internal carrier
selection service
(with priority given to sea
routes)

OUR CARRIER PARTNERS

Dickson partners with selected land, sea, and air carriers to provide customers with a more responsive and better service.

FRANCE (ROAD)



ABROAD (ROAD)



GONDRAND



LONG-DISTANCE EXPORT FRANCE (AIR AND SEA)



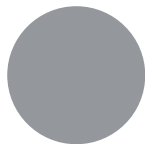
A white ribbed ceramic mug is tipped over on a light-colored, textured fabric surface. A silver spoon is stuck inside the mug. A small amount of coffee has spilled out of the mug, forming a small puddle and a trail of droplets on the fabric. In the top left corner, a portion of a light-colored, textured pillow is visible. The word "PERFORMANCE" is printed in large, white, bold, sans-serif capital letters in the center of the image.

PERFORMANCE

DEEPLY DURABLE FABRICS

High-quality Sunbrella pigments penetrate all the way through the fiber during production when the acrylic is still in its liquid state.

The result is a solution-dyed Sunbrella yarn and a fabric with outstanding colorfastness, strength, and durability. Conventional textile yarns and fabrics are simply color-dipped, so pigments only penetrate the upper layer.



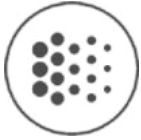
SOLUTION-DYED ACRYLIC



YARN-DYED



RECOGNIZED PERFORMANCE



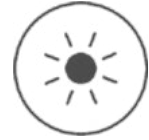
COLORFAST



WATER
REPELLENT



STAIN
RESISTANT



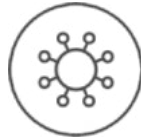
PROTECTION
FROM
UV RAYS



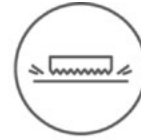
EASY
TO CLEAN



BREATHABLE



MOLD RESISTANT



ABRASION &
PILLING RESISTANCE

WARRANTY

5

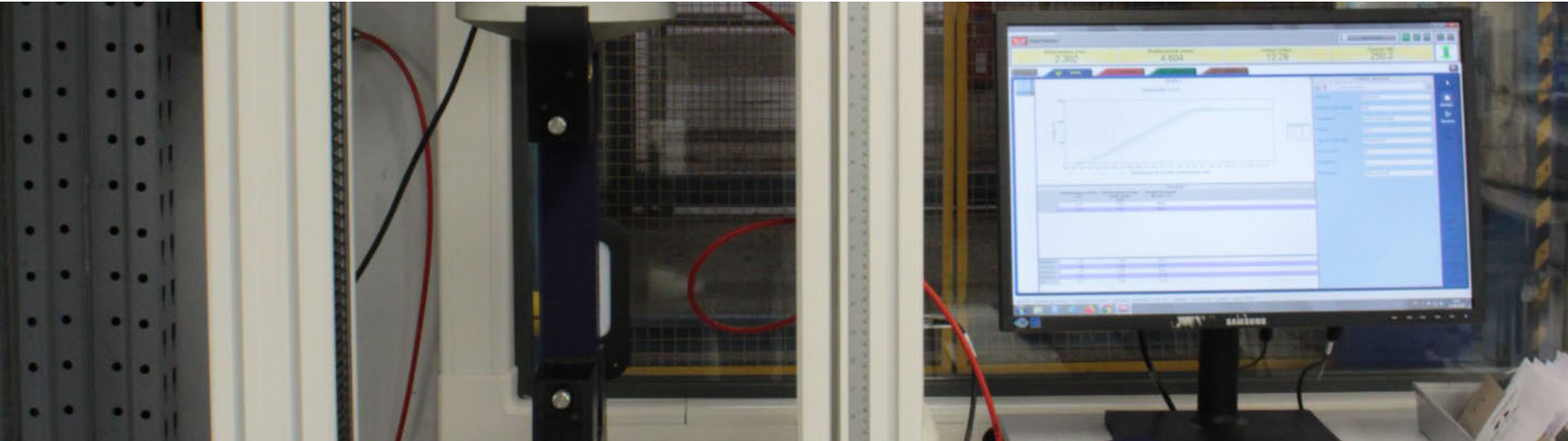
YEARS

A close-up photograph of a red, textured fabric surface. Three large, clear water droplets are visible, each reflecting light and showing the texture of the fabric underneath. The fabric is resting on a dark, rough, and porous material, likely cork. The background is a bright, out-of-focus white surface. The text "TESTING AND STANDARDS" is overlaid in white, bold, sans-serif font in the center-right of the image.

**TESTING AND
STANDARDS**

OUR LABORATORY

The technical properties of our fabrics are systematically controlled in laboratory tests. Quality control is an integral part of our business. Each batch is subject to a series of laboratory tests at our production site in France.



ABRASION: MARTINDALE

NF EN ISO 12947 standard

The Martindale method measures the fabric's abrasion resistance to friction, and counts the number of revolutions before it tears.

A circular holder mounted on an abrasion tester and subjected to a pressure of 12 kPa is rubbed against discs of woolen worsted.

Abrasion resistance is determined as the number of rub cycles recorded at three threads broken.



ABRASION: WYZENBEEK

ASTM 4157 Standard

The Wyzenbeek is an oscillating abrasion device for determining the abrasion resistance of a fabric according to an American standard.

Each of four stations holds a specimen taut and utilizes contoured foam pads to apply pressure down against an oscillating drum. The drum abrades the specimens with cotton duck cloth. The end point is reached when two yarn breaks occur.



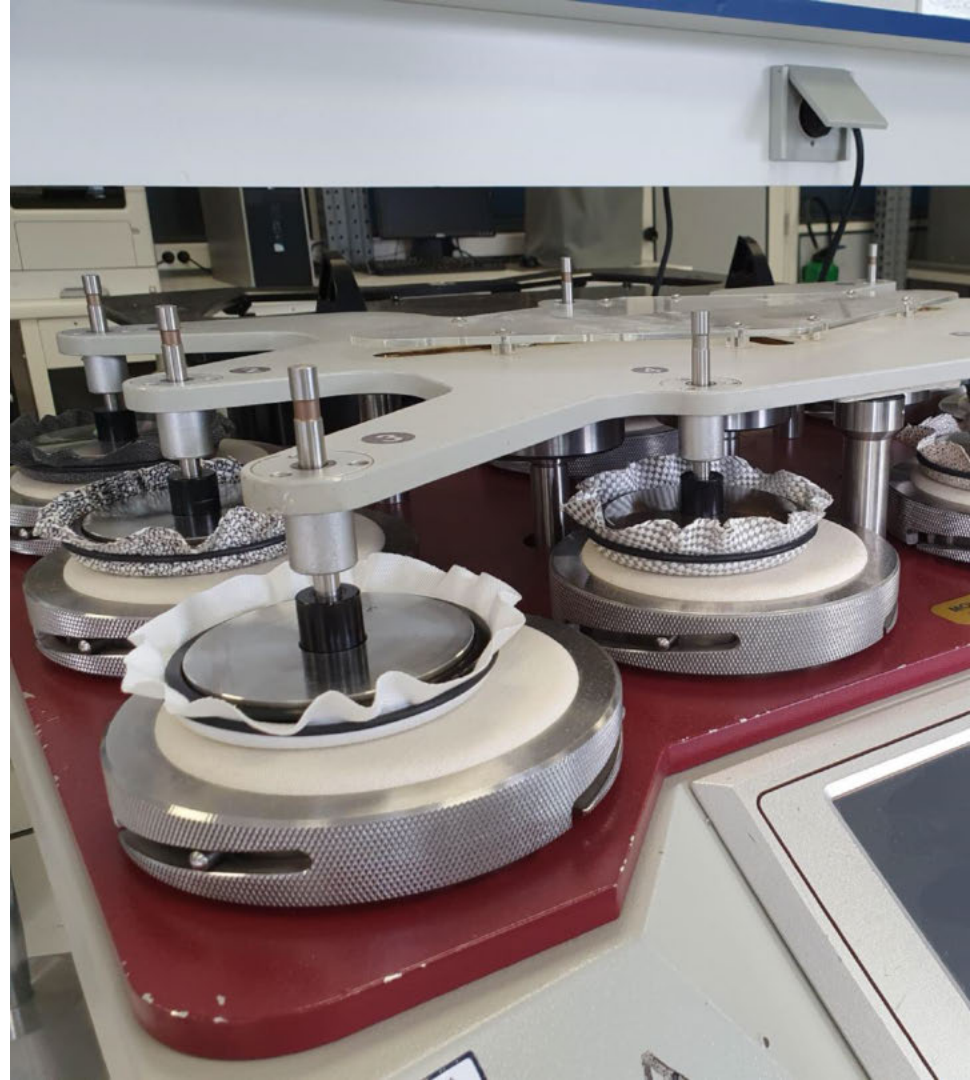
PILLING: MARTINDALE PILLING

NF EN ISO 12945-2 standard

This test consists of rubbing the fabric until small pills of tangled fibers, the pilling, form.

A circular specimen is subjected to a certain pressure on an abrasive woolen fabric in Lissajous figures.

The test pieces are assessed at 500, 1,000, 2,000, and 5,000 cycles under appropriate lighting conditions (illuminant D65) and using photographs.



SEAM SLIPPAGE

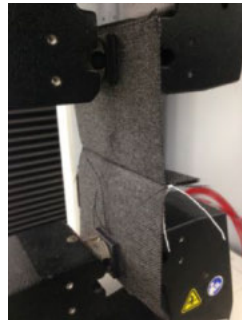
NF EN ISO 13936-2 standard

This method determines the seam slip resistance of all threads in a woven fabric.

It measures the resistance offered by thread systems of woven fabric to slippage at a sewn seam to 180 N load.

Part of the space may close when the load is removed, but may suffer permanent distortion.

Specimen dimensions: 10x20cm



SEAM TENSILE PROPERTIES

NF EN ISO 13935-2 standard

This method determines the maximum force of sewn seams when the force is applied perpendicularly to the seam.

A specimen with a central seam is gripped in jaws moving at a constant rate of extension to seam rupture.

Resistance is the maximum force recorded when a specimen is taken to seam rupture.

Specimen dimensions: 10x25cm



COLORFASTNESS TO ARTIFICIAL WEATHERING

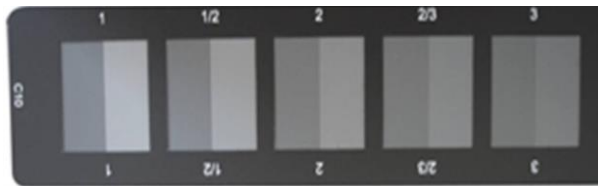
NF EN ISO 105 B04 standard

The outdoor standard can be used to determine if a textile is wet light-sensitive.

Specimens are exposed to the light of a xenon arc lamp and a water spray for 1,000 hours.

A grey scale is used to assess a change in color.

Equipment used: ATLAS Ci5000



COLORFASTNESS TO ARTIFICIAL LIGHT

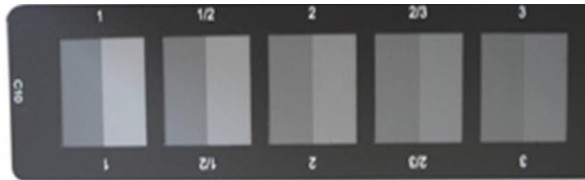
NF EN ISO 105 B02 standard

The indoor standard is used to determine the effect an artificial light source representative of natural daylight has on the color of textiles.

A specimen is exposed to artificial light for 100 hours.

A grey scale is used to assess a change in color.

Equipment used: ATLAS Ci5000



RUBBING DRY AND WET

NF EN ISO 105x12 standard

Specimens are rubbed with a dry and a damp cotton cloth to determine the resistance of colors to rubbing.

At a speed of 1 cycle per second, the specimen is rubbed 20 times to and fro in a straight line over a determined length.

Color bleeding assessment on cotton is done using a grey scale and under appropriate lighting conditions (illuminant D65).

Equipment used: Crockmeter

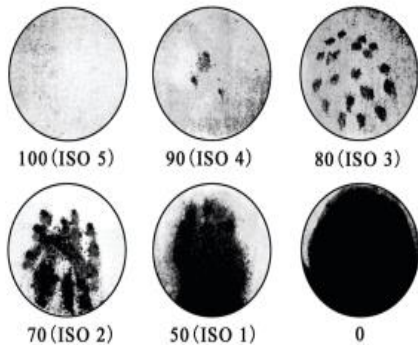


SPRAY TEST

NF EN ISO 4920 standard

This test consists of pouring distilled water on a specimen mounted on a circular frame and tilted at 45°.

The spray rating is determined by comparing the appearance of the tested specimen with photographs.

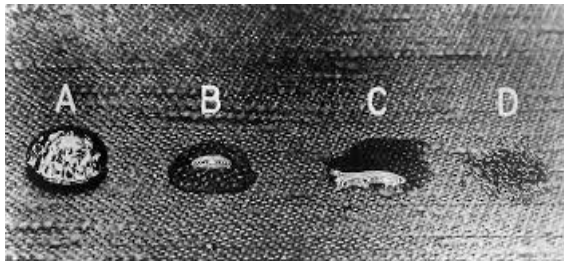


OIL REPELLENCY

NF EN ISO 14419 standard

Drops of standard test liquids, consisting of a selected series of test hydrocarbons of different surface tensions, are placed on the surface of the test specimen.

The specimen is then observed for absorption, wicking, and contact angle. The oil repellency grade is the highest numbered test liquid which is not absorbed by the specimen.



DETERMINATION OF DIMENSIONAL CHANGE IN WASHING

NF EN ISO 5077 standard

A specimen is separately subjected to a complete short wash cycle in a whirlpool wash bath at the required temperature, ending with a short spin cycle, followed by air drying.

Dimensional variations are determined by comparing the distances between the marks in width and length directions BEFORE and AFTER a programmed test cycle.

Dimensional change is measured as a percentage.



RESISTANCE TO BENDING

NF EN ISO 2493 standard

This method is used to determine the bending moment required to deflect a specific corner of a specimen attached at one end.

The bending resistance is expressed in terms of the bending moment.



The image features two pillows stacked on top of each other. The top pillow is a dark, textured blue, while the bottom pillow is a lighter, sage green color with a similar texture. The word "WARRANTY" is printed in a bold, white, sans-serif font across the center of the pillows. The background is a soft gradient from light purple to light blue, and the bottom edge shows a brown surface.

WARRANTY

WARRANTY

5

YEARS

Sunbrella® products are guaranteed rot-proof and colorfast for 5 years after purchase.

This limited warranty exclusively covers the rot-resistance and colorfastness of regularly maintained fabrics under normal use and environmental conditions.





ENVIRONMENT

A BRAND THAT CARES ABOUT THE ENVIRONMENT

Transforming our waste

Heritage is the first range produced under our Renaissance program. This initiative was launched to create fabrics containing 50% recycled Sunbrella® fibers.

These recycled fibers are sourced directly from production plants where waste is sorted into color groups. These fibers are then mixed with “virgin” Sunbrella® fibers.

Heritage is composed of 12 colors in natural shades. As this fabric is recycled, the shade of color may vary between batches and occasional flammé yarns give the fabric added character.

Learn more:

<https://global.sunbrella.com/en-us/sustainability>





Reducing our waste

Our resistant, colorfast fabrics do not need to be replaced as often as conventional fabrics, meaning they produce less waste.



Minimal water consumption

Adding color pigments directly to the yarn guarantees colorfastness and saves water. The small amount of water used in our weaving process is fully recycled in-house.

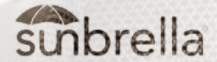




Zero waste

For more than 30 years, Sunbrella® has recycled its industrial waste, such as yarn and packaging. All Sunbrella production sites worldwide now implement this policy and no waste is sent to landfill.





sunbrella

DESIGN + PERFORMANCE

CERTIFICATION

GREENGUARD

Greenguard certification guarantees that Sunbrella® fabrics help create a healthy indoor environment by reducing the risk of chemical exposure.

GREENGUARD certification identifies products and indoor materials that meet standards for low emissions of volatile organic compounds and particulate matter to improve indoor air quality.

All certified products are tested and evaluated according to standards developed in partnership with ASTM, US EPA, ISO and European organizations. In addition, all laboratory tests must comply with ISO 17025.

GREENGUARD GOLD includes health-based criteria for additional chemicals and also requires lower total volatile organic compound (VOC) emission levels to ensure that products are acceptable for use in environments such as schools and health care facilities. In addition to limiting emissions of more than 360 VOCs and total chemical emissions, GREENGUARD Gold Certified products must also comply with requirements of the state of California Department of Public Health (CDPH).



OEKO-TEX

Sunbrella® fabrics are produced without hazardous substances and do not pose a threat to health, the skin or the environment.

The Oeko-Tex standard 100 is a globally uniform testing and certification system for harmful substances in textiles.

The test catalog includes:

Illegal substances such as carcinogenic colorants.

Legally regulated substances such as formaldehyde, heavy metals, and pentachlorophenol.

Substances which are known to be harmful to health but not yet regulated by law such as pesticides, colorants, allergenic dyes or organic compounds containing tin.

Parameters such as colorfastness and a skin-friendly pH-value, which are precautionary measures to safeguard consumer health.



REACH REGULATIONS

The treatments developed by Sunbrella are designed and applied in strict compliance with the European REACH regulation.

REACH stands for "Registration, Evaluation, Authorization and Restriction of Chemicals". The regulation came into force on 1 June 2007.

REACH is a regulation of the European Union, adopted to improve the protection of human health and the environment from the risks that can be posed by chemicals, while enhancing the competitiveness of the EU chemicals industry.

Under the REACH regulation, animal testing is to be avoided in favor of alternative methods of assessing hazardous substances.

REACH applies to all chemical substances, both those needed for industrial processes and those we use in our everyday lives.



ISO 14001:

Environmental management

ISO 14001 sets out the criteria for developing and maintaining an environmental management system.

This allows us to evaluate our activities with regard to the environment, to demonstrate our commitment to its protection, and to validate the environmental actions implemented.

Dickson Constant undergoes an annual audit by an accredited and independent body to renew this certification. Sunbrella textiles are produced in Europe by Dickson Constant.

ISO 9001
ISO 14001
ISO 45001

BUREAU VERITAS
Certification



ISO 50001:

Energy management

ISO 50001 enables companies to improve their energy performance every year, consume more efficiently, and reduce losses.

ISO 50001 is the only management standard that requires quantified results and improvements in consumption every year.

Dickson Constant undergoes an annual audit by an accredited and independent body to renew this certification. Sunbrella textiles are produced in Europe by Dickson Constant.

ISO 9001
ISO 14001
ISO 45001
BUREAU VERITAS
Certification



ISO 9001:

Quality management

This is a guide to organizing the company in order to continuously provide products and services that meet customer requirements.

It is also intended to increase customer satisfaction based on continuous system improvement.

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ISO 9001
ISO 14001
ISO 45001

BUREAU VERITAS
Certification



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ISO 45001:

Health and safety management system

ISO 45001 is intended to improve the health and safety of employees and visitors in the workplace.

It is aimed at organizations that are serious about improving employee safety, reducing workplace risks, and creating better, safer working conditions.

Each year, improvements must be made to reduce the health and safety risks for employees and visitors.

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ISO 9001
ISO 14001
ISO 45001
BUREAU VERITAS
Certification



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FLAMMABILITY

NF EN 1021-1 October 2014

(European standard)

BS 5852 part 1

(British standard)

Assessment of the flammability of upholstered furniture by means of the cigarette test determined by EN 1021 Part 1. The cigarette test corresponds to the lowest classification Class P-c.

A lit cigarette is placed at the junction of the test rig in contact with the back and seat. It is left to burn its entire length. The fabric is examined for smoldering and flaming, neither of which should be observed.



FLAMMABILITY

CAL 117

California standard.

CAL 117 sets the standard for upholstered furniture flammability in the furniture industry and requires that certain materials pass an open flame test.

The tests are conducted within a closed test chamber where technicians can measure how quickly the open flame spreads and grows. The smolder test involves placing a lit cigarette on the furniture and measuring the length of the char that forms. Technicians also measure the amount of heat, smoke, and carbon monoxide that is generated.

NFPA 260

US standard

This test method provides a means of measuring how resistant upholstered furniture components are to cigarette ignition.

The test material is put on a chair simulation and is exposed to a burning cigarette. It must burn its entire length. The test material is classified as Class I or II. If an obvious ignition occurs, the material is Class II.



**CLEANING OUR
PRODUCTS**

NEW STAINS

One of the best ways to keep Sunbrella fabrics in good condition is to remove liquids and stains quickly before they soak into the fabric.

Dab (rather than rub) spills with a clean, dry cloth. For oil or oily stains, apply an absorbent such as cornstarch, then clean with a squeegee.

Prepare a cleaning solution by mixing water with mild soap.

Rinse or dab the fabric thoroughly to remove any remaining soap.

Leave to dry in the open air. Rinse and dab until all the soap has been removed.



STUBBORN STAINS

1. Prepare a solution of 6 cl of bleach and 1.5 cl of mild soap per liter of water.
2. Spray the whole surface and wait 15 minutes for it to penetrate the fabric.
3. Clean the whole surface with a sponge, a clean towel, or a very soft brush.
4. Rinse thoroughly to remove any remaining soap.
5. Leave to dry in the open air.
6. For stubborn stains, increase the dosage of bleach.
7. Ideally clean the whole fabric surface to prevent water stains.

For information on cleaning other common stains, see our stain table.



Do you need to remove a stubborn stain, red wine or rust from your furniture?

See our stain table

Stain	Recommended cleaning solutions	Commercial cleaning product	Stain	Recommended cleaning solutions	Commercial cleaning product
Red fruit	Mix 1.5 cl of dishwashing liquid with 3-6 cl of white vinegar per liter of water.	Upholstery fabric cleaner such as Tex Activ.	Crayon	Apply isopropyl alcohol, then clean with 1.5 cl of dishwashing liquid per liter of water.	Carbona™ Stain Devils for ink and crayon.
Bird droppings Ketchup/Mustard Coffee Cola Egg (raw) Grape juice Milk Tea	Mix 1.5 cl of liquid per liter of water.	Upholstery fabric cleaner such as Tex Activ.	Ink (India ink, ballpoint pen) Nail polish	Apply a volatile solvent (100% acetone), then clean with soap and water, and rinse thoroughly.	Upholstery fabric cleaner such as Tex Activ.
Beer Food coloring Urine Vomit	Mix 1.5 cl of dishwashing liquid with 2 cl of white vinegar per liter of water.	Upholstery fabric cleaner such as Tex Activ.	Rust	Treat with CLR, then rinse thoroughly.	Rust remover such as CLR®.
Butter Fat Oil Fresh/dry paint Salad dressing Shoe polish Sun cream Tomato juice Sap	Apply cornstarch as an absorbent, remove excess with a squeegee, clean the residue with dishwashing liquid and water.	Upholstery fabric cleaner such as Tex Activ or strong grease-remover.	Kool-Aid	Mix 1.5 cl of dishwashing liquid per liter of water, then rinse thoroughly.	Upholstery fabric cleaner such as Tex Activ.
			Mold	Mix 1.5 cl of dishwashing liquid with 0.6 cl of bleach per liter of water.	No recommended commercial cleaners. A higher dosage of bleach may be needed to clean severe mold.

Stain	Recommended cleaning solutions	Commercial cleaning product	Stain	Recommended cleaning solutions	Commercial cleaning product
Blood (dried)	Mix 1.5 cl of dishwashing liquid with 3-6 cl of ammonia per liter of water.	Hydrogen peroxide solution and upholstery cleaner such as Tex Activ.	Shoe wax	Apply a heated iron to a cloth. Apply cornstarch as an absorbent, remove the excess with a squeegee, clean the residue with dishwashing liquid and water.	Upholstery fabric cleaner such as Tex Activ.
Coal Pencil	Vacuum and then clean with 1.5 cl of dishwashing liquid per liter of water.	Upholstery fabric cleaner such as TexActiv.	Wax (candle)	Apply a heated iron to a cloth. Apply isopropyl alcohol, then clean with 1.5 cl of dishwashing liquid per liter of water.	Wax remover such as Carbona™ Stain Devils for glue, gum, and nail polish.
Chewing gum	Apply isopropyl alcohol, then clean with 1.5 cl of dishwashing liquid per liter of water.	Upholstery fabric cleaner such as TexActiv.	Wine	Mix 1.5 cl of dishwashing liquid with 2 cl of white vinegar and 3-6 cl of isopropyl alcohol or hydrogen peroxide solution per liter of water.	Upholstery fabric cleaner such as Tex Activ.
Chocolate	Mix 1.5 cl of dishwashing liquid with 3 cl of hydrogen peroxide solution per liter of water.	Upholstery fabric cleaner such as TexActiv.			

Watch our video on cleaning stains at <https://global.sunbrella.com/en-us/how-to-clean>



ASSEMBLY ADVICE

CUTTING

We would recommend cutting the fabric with a laser.

It may also be cut with scissors or a hot knife.

A hot knife (wire or blade) or an ultrasonic cutter can be used to create a fused edge.

Do not tear the fabric.

Ventilate the room when cutting with a hot instrument.

Under normal conditions, Sunbrella fabric does not shrink during cutting.

Stack cutting is not recommended for fabrics with complex patterns.



SEWING

- ✓ Make sure the needle is the right size and sharpness
 - Size 16/18 with rounded tips to avoid splitting yarns
- ✓ The diameter of the sewing thread and the needle size must be adapted to the fabric
 - Thread 100-110 NM - Needle 16/18
- ✓ Lockstitch machines must use the same thread for both the bobbin and the needle
- ✓ Pattern, cut and sewing must allow for a minimum of 1/2 inch (1.27 cm) of stitching



ASSEMBLY

Set the sewing machine to seven stitches per inch (2.54cm).

Reducing/eliminating seam wrinkling:

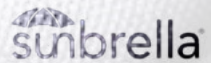
- ✓ Determine the type of wrinkling (displacement, tension or feed)
- ✓ Displacement - Low stitch density = higher tension
- ✓ Tension - Lower thread tension = less likely to wrinkle
- ✓ Feed - Lower presser foot pressure, fine-toothed feed dog
- ✓ Maintain tension before and after the needle to minimize gathers when sewing.



CUSHION ASSEMBLY

- ✓ Moisture penetration depends on the cushion design
- ✓ Moisture retention depends on the design and type of filling
- ✓ Zippered cushions are easier to clean
- ✓ Non-zippered cushions may require the use of an extractor to be cleaned thoroughly
- ✓ Cushions with a thicker, deeper seat retain more heat and deteriorate more quickly





DESIGN + PERFORMANCE™

FOR MORE INFORMATION, VISIT
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