CEREX®

Spunbond Nylon

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Product Description

Cerex® products are nonwoven fabrics made by spinning and autogenously bonding continuous filaments of nylon into a flat, smooth, strong, crisp fabric.
Autogenous bonding is achieved by exposing the nylon web to a chemically activating gas phase that is later removed from the web. The fabric is available in weights ranging from 10 g/m^2 up to 95 g/m^2 (0.25 ounces/square yard - 2.8 osy) in widths up to approximately 3 meters (120 inches).

Typical Applications/ End Uses

- Automotive
- Airbag-Packaging
- Medical
- Coating Substrate
  - Conveyor Belts
  - Adhesive Tapes
- Composite Strength Component
- Filtration
  - Air Filters
  - Liquid Filters
    - Oil
    - Coolant
    - Drain Fields
- Carpet Cushion Backing
- Furniture and Bedding Industry
- Printing Press Media
- Decorative components

The Nylon Advantage®

- High Strength at low Weight
- Good Thermal Stability
  - Melting Point at 260°C
  - Heat set at 205°C
- Meets flammability requirements of FMVSS302
- Good balance of strength and elongation
- Excellent Uniformity
- Excellent tear and burst strength
- High stich strength and non-raveling selvages
- Readily dyeabel; prints well
- Will calender and emboss efficiently
- Very large surface area; good bonding properties
- Resistant to chemical attack – resistant to:
  - Alkalies
  - Hydrocarbons
  - Ketones (Aceton…)
  - Esters
- Available in colors

Certified to ISO 9001:2000

Our laboratory is A2LA accreditated to ISO/IEC 17025
** Scope of registration is available upon request. Display of this symbol does not imply that our fabrics are certified by A2LA.*

Flammability

Our nylon spunbond fabrics meet all requirements for FMVSS302 (Motor Vehicle Safety Standard). This is a horizontal test.

In addition, our fabrics are classified as "Class 1… normal flammability….these textiles are generally accepted by the trade as having no unusual burning characteristics," when tested under the Department of Commerce Flammable Fabrics Act 45° Burn Test (CS 191-53 revised).

Our fabrics also pass the Upholstered Furniture Action Council flammability requirements. This is a "corner" or "crevice" test.

Skin Contact Applications

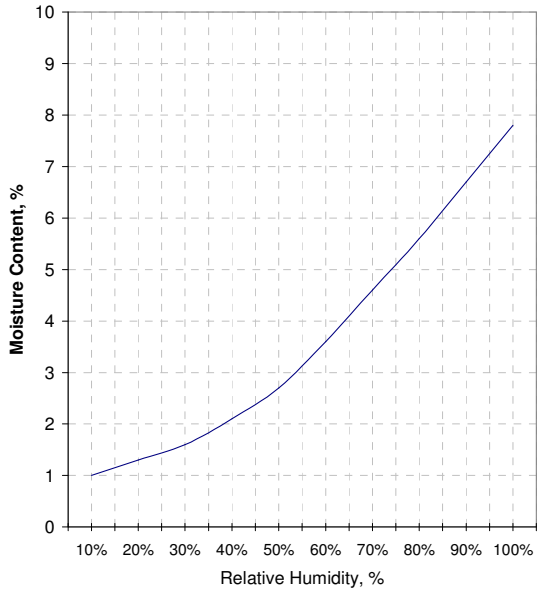
CEREX Advanced Fabrics, Inc. has received Oeko-Tex Standard certification from the Oeko-Tex Association. CEREX Advanced Fabrics, Inc.'s nonwoven fabrics chemical bonded CEREX® and thermal bonded PBN-II® and ORION® products meet the Oeko-Tex Standard 100. This is a European Textile Testing standard that certifies that our products have been tested to be ecologically safe and do not pose any health risk to consumer - "safe enough for babies".

CEREX Advanced Fabrics, Inc. has conducted cytotoxicity studies on this material and found no toxicological issues that would warrant special handling. It is not a primary skin irritant, a cumulative irritant, or a sensitizing agent.

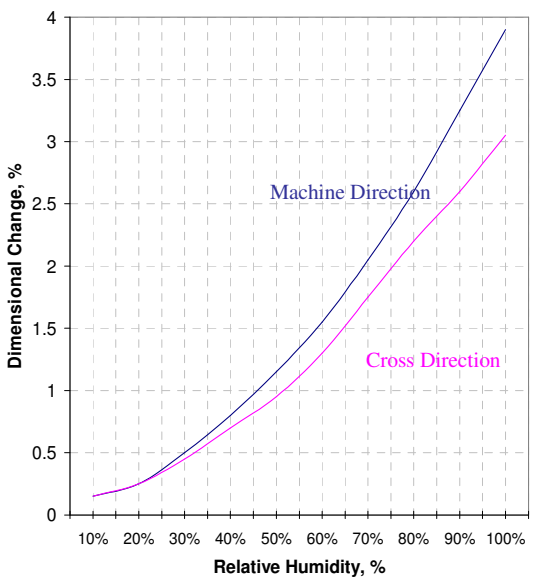
Nylon and Water

All types of nylon are hygroscopic. The moisture absorbed from the atmosphere acts as a plasticizer and causes slight dimensional changes. Moisture regain, i.e. the amount of water absorbed from the atmosphere at typical conditions of temperature and relative humidity, is about 3-5%. The absorbing, desorbing of water in nylon occurs very rapidly. A change in relative humidity will cause a dimensional change in nylon within minutes.

Moisture Content of Cerex as a function of Relative Humidity



Typical Dimensional Change of Cerex as a function of Relative Humidity



Chemical Resistance of CEREX®

Nylon 6,6 is resistant to most organic chemicals including hydrocarbon fuels and lubricants, esters, ketones, brake fluids, and full halogenated hydrocarbons. Polar solvents such as alcohols and partially halogenated hydrocarbons tend to be absorbed and to plasticize nylon, much as water does.

Nylon 6,6 is attacked by strong acids, oxidizing agents and concentrated solutions of certain salts. However, it is resistant to alkalis and can, for instance, be used in contact with 30% potassium hydroxide at ambient temperatures.

Temperature has a profound effect on all chemical attack mechanisms. Raising the temperature increase the reaction rates rapidly; the rate of reaction is usually doubled or tripled for every 10°C (18°F) rise in temperature. A higher temperature also causes a polymer to expand and become more penetrable, more permeable, and more soluble. Therefore, extrapolation of low-temperature data to elevated temperatures usually is a bad risk.

The concentration of a reagent is always a critical condition because it affects the rate of chemical reaction. Moreover, reagents in substantially different concentrations may show significantly different hostility due to complexing. For this reason, extrapolation from very dilute or very concentrated solutions also is unwise.

ENVIRONMENT	CONCENTRATION	TEMPERATURE, °C	TIME, HOURS	EFFECT ON TENSILE STRENGTH
ACIDS				
Acetic Acid	Glacial	22	1000	None
Formic Acid	100%	22	--	Dissolves
Formic Acid	50%	22	1000	None
Hydrochloric Acid	37%	22	--	Dissolves
Sulfuric Acid	60%	22	--	Dissolves
Sulfuric Acid	10%	22	1152	Serious
Sulfuric Acid	5%	22	1152	Slight
BASES				
Ammonium Hydroxide	Conc.	22	1000	Slight
Potassium Hydroxide	30%	22	7560	None
Sodium Hydroxide	5%	100	10	None
SOLVENTS				
Acetone	100%	22	1000	None
Benzene	100%	22	1000	None
Carbon Tetrachloride	100%	22	1000	None
Dimethylformamide	100%	22	1000	None
Ethanolamine	30%	90	80	Slight
Ethanolamine	10%	90	80	None
Ethyl Alcohol	95%	22	1000	None
Ethylene Glycol	100%	150	--	Dissolves
Ethylene Glycol	100%	22	1000	None
Ethylene Glycol	50%	110	35	Slight/None
Trichloroethylene	100%	22	1000	None
Water	100%	110	740	None
MISCELLANEOUS				
Hydrogen Peroxide	10%	22	24	None
Jet Fuel (ESSO A-1)	100%	95	35	Slight
Motor Oil (Detergent)	100%	150	1200	None
Potassium Permanganate	2%	80	1	Dissolves
Sodium Chloride	0.85%	22	240	None

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