

**This glossary of fabric definitions has been adapted in whole or part from the websites listed at the end of each definition.**

**ACT (Association for Contract Textiles):** A trade association that addresses a variety of issues related to contract (commercial) fabrics including criteria for performance standards such as abrasion, pilling, lightfast, colorfast, crocking, and flammability. [www.contract-textiles.com](http://www.contract-textiles.com)

**Bamboo:** A grass with a hollow woody stem grown in tropical and semitropical areas. Bamboo requires chemicals to convert it into a useful textile fiber, but it is sustainable because it has a rapid growth and harvest cycle, does not require fertilizers or pesticides or watering. It re-grows in 3-5 years. Bamboo takes in more carbon dioxide than trees and releases more oxygen into the air.

**Bella-Dura™:** is a trade marked synthetic olefin fabric salvaged from by-products of post-industrial petroleum refining waste. It is 'closed loop' recyclable into inert black plastic resin pellets for a myriad of products. Its manufacturing uses substantially less energy, a small amount of water and produces no harmful industrial waste. This by-product that would otherwise be incinerated. Bella-Dura fabrics have achieved a Silver certification by MBDC (McDonough Braungart Design Certification). (See MBDC.) Bella-Dura™ is inherently and permanently stain-resistant, anti-microbial, anti-fungal and bleach-cleanable (solution dyed), Bella-Dura fabrics exceed 50,000 double rubs and 1,500 hours UV lightfastness. A mild soap and warm water solution (one part soap to ten parts lukewarm water) is all that is required for most spills. [www.Bella-Dura.com](http://www.Bella-Dura.com)

**Biodegradable:** a product can be decomposed or metabolized by microorganisms and reduced to organic or inorganic nutrients for further use.

**Breaking Strength:** is the measurement of stress exerted to pull a fabric apart under tension. [www.contract-textiles.com](http://www.contract-textiles.com)

**By-product:** A secondary product of an industrial or biological process.

**Certified Organic:** Natural fibers that have been grown according to strict uniform standards that are verified by an independent organization. [www.robertallendesign.com](http://www.robertallendesign.com)

**Colorfast:** A material's degree of resistance to the fading effect of light. [www.contract-textiles.com](http://www.contract-textiles.com)

**Compostable:** A product that can break down into usable compost (e.g. soil-conditioning material, mulch) in a safe and timely manner. [www.contract-textiles.com](http://www.contract-textiles.com)

**Cotton:** is a natural cellulose fiber from the boll of a cotton plant. Production uses more chemicals per unit than any other crop. Organic cotton reduces this chemical use because it is grown without pesticides or chemical additives to fertilizer, relying instead on methods with less ecological impact, such as crop rotation. [www.robertallendesign.com](http://www.robertallendesign.com)

**Cradle-to-Cradle:** A term used in life-cycle analysis to describe a material or product that is recycled into a new product at the end of its defined life. [www.contract-textiles.com](http://www.contract-textiles.com) The name comes from the book by William McDonough, architect and Dr. Michael Braungart, chemist – co-founders of MBDC. Cradle-to-Cradle Design is MBDC's design paradigm, based on principles and an understanding of the pursuit of value, as well as MBDC's processes for product and material research and development, and for educating and training. The new paradigm proposes that human design can learn from nature to be

effective, safe, enriching, and delightful. Cradle-to-Cradle Design models human industry on nature's processes, in which materials are viewed as nutrients circulating in healthy, safe metabolisms. Industry must protect and enrich ecosystems — nature's biological metabolism — while also maintaining safe, productive technical metabolism for the high-quality use and circulation of mineral, synthetic, and other materials. [www.MBDC.com](http://www.MBDC.com)

**Crocking:** Transfer of dye from the surface of a dyed or printed fabric onto another surface by rubbing. This is tested both wet and dry. [www.contract-textiles.com](http://www.contract-textiles.com)

**Crypton® Green:** is a trade marked polyester fabric that was assessed by MBDC for human and environmental health and awarded a Silver Cradle-to-Cradle™ certification. It has superior durability, cleanability, odor resistance, and liquid impermeability. It has reduced and/or eliminated formaldehyde, PFOAs, and PBDEs. [www.cryptonfabric.com](http://www.cryptonfabric.com)

**Dye:** Colour pigments in liquid form used give fabric, yarns or fiber solution a hue.

**Environmental Protection Agency (EPA):** U.S. federal agency established in July, 1970 to protect human health and to safeguard the natural environment air, water, and land upon which life depends; works closely with other federal agencies, state and local governments to develop and enforce regulations under existing environmental laws; provides leadership in the nation's environmental science, research, education and assessment efforts; and is responsible for researching and setting national standards for a variety of environmental programs and delegates to states and tribes; responsible for issuing permits, and monitoring and enforcing compliance. [www.epa.gov](http://www.epa.gov) (Source: ACT)

**Finishing:** A process that coats a fabric to improve its appearance or provide protection from fire, water or stains.

**Flammability:** The measurement of a fabric's performance when it is exposed to specific sources of ignition. [www.contract-textiles.com](http://www.contract-textiles.com)

**Flame Retardant:** Commercial textiles are often backcoated in or immersed in decaBDE (one of the PBDEs), to protect the furniture foam from combustion. Alternatively, use inherently flame-resistant fibres which burn very slowly and often self-extinguish, or treat fabrics with an organophosphorous chemical. DecaBDE is used due to low cost. Tightening the weave of a fabric prevents the circulation of oxygen which supports combustion can improve a fabric's ability to pass a flame retardant test. Placing a barrier of inherently flame-resistant material between the exterior fabric and the foam increases flame-retardancy. (eg. Kevlar flame blocker) [www.ecojustice.ca](http://www.ecojustice.ca) (formerly Sierra Legal Defense Fund)

**Formaldehyde:** is used in the textile finishing process to cure fabrics and to make them wrinkle resistant. The European Union is considering a complete ban on formaldehyde usage, including embalming usage. It is an intermediate in the oxidation (or combustion) of methane as well as other carbon compounds, e.g. forest fires, in automobile exhaust, and in tobacco smoke. When produced in the atmosphere by the action of sunlight and oxygen on atmospheric methane and other hydrocarbons, it becomes part of smog. [www.wikipedia.com](http://www.wikipedia.com)

**Green:** A general word used to describe something that is thought to be beneficial to the environment. To convey meaning, 'green' must have more description.

**Greenhouse gas:** Certain gases (including water vapour, carbon dioxide, methane, nitrous oxide, and ozone and several classes of halogenated carbons that contain fluorine, chlorine and bromine) that allow solar radiation to reach Earth's surface and become absorbed, yet trap thermal radiation leaving the earth's surface. Outgoing thermal radiation absorbed by these gases heats the atmosphere. The atmosphere then emits thermal radiation both outward into space and downward to earth, further warming the surface. [www.contract-textiles.com](http://www.contract-textiles.com)

**Greenwashing:** is the advertising practice of pretending that a product or material is environmental friendly when it is not or the link is very tenuous. Some companies not anxious to change their operations, instead use 'green' marketing to mask or soften their images. [www.bankrate.com](http://www.bankrate.com)

**Heavy metal:** Any metallic chemical element that has a relatively high density and is toxic at low concentrations. (Examples are mercury, cadmium, arsenic, chromium, thallium and lead). Semi-metallic elements (such as antimony, arsenic, selenium and tellurium) are often included in this classification. [www.contract-textiles.com](http://www.contract-textiles.com) These are examples of natural ingredients that can be harmful to human health. Their use is required in many processes and this may not be a problem as long as they can be captured at the end of the manufacturing process for reuse.

**Hemp:** Strong, sustainable cellulose fibres from inside the stalk of a tall plant. Little or no pesticides are used in the farming of hemp, and the plant replenishes soil with nutrients and nitrogen. Hemp used in fabrics does not contain the cannabis active ingredient THC (tetrahydrocannabinol).

**ISO (International Standards Organization):** A non-governmental organization located in Geneva, Switzerland, chartered to develop voluntary technical standards that aim to make the development, manufacture and supply of goods and services safer, cleaner and more efficient. [www.iso.ch](http://www.iso.ch)

**ISO 14000:** ISO standards and guidelines that address environmental issues. [www.iso.ch](http://www.iso.ch)

**LEED™- Leadership in Energy and Environmental Design:** A point-based rating system developed by The U.S. Green Building Council Rating System for Sustainable Development (USGBC) to assess new and existing commercial buildings for a variety of earth-friendly features. [www.usgbc.org](http://www.usgbc.org) There are also a Canadian GBC with chapters across Canada and chapters around the world. [www.worldgbc.org](http://www.worldgbc.org) This system has been expanded recently to include certification for residential homes.

**Linen:** A natural cellulose fibre taken from the inside of the flax plant stalks. Fibres are very strong, have excellent sun resistance, but lack flexibility.

**MBDC - McDonough Braungart Design Certification:** company founded by William McDonough, American architect and Michael Braungart, German chemist that provides manufacturers with a means to tangibly and credibly measure achievement in environmentally-intelligent design. They provide 3<sup>rd</sup> party certification for environmentally safe and healthy materials; design for material reutilization, such as recycling or composting; use of renewable energy and energy efficiency; efficient use of water, and maximum water quality associated with production; and instituting strategies for social responsibility. [www.mbdc.com](http://www.mbdc.com)

**McDonough, William:** American Architect, author of the **Hannover Principles**, presented at the Hannover World Fair Expo, 2000. **1.** Insist on rights of humanity and nature to co-exist; **2.** Recognize interdependence; **3.** Respect relationships between spirit and matter; **4.** Accept responsibility for the consequences of design; **5.** Create safe objects of long-term value; **6.** Eliminate the concept of waste; **7.**

*We help people select the 'coolest shade of green' for beautiful sustainable interior design that enhances their body, mind & spirit. To subscribe to Dayle's newsletter, "Coolest Shade of Green", visit her website, [www.daylelaing.com](http://www.daylelaing.com)*

Rely on natural energy flows; **8.** Understand the limitations of design; **9.** Seek constant improvement by sharing of knowledge. [www.mcdonough.com](http://www.mcdonough.com)  
[www.mcdonough.com/principles.pdf](http://www.mcdonough.com/principles.pdf)



**Mobius Loop:** This is the universal logo for recycling. By itself, it lacks significance without further explanation of percentage recycled and whether it is the product or only the packaging of the product has been recycled. The loop has been incorporated into more than 300 other corporate logos.

**Mohair:** Wool protein fibres from the shorn fleece of Angora goats. Mohair is durable and resilient and is often used in blends with wool because of high luster. It takes dye exceptionally well. Used in the pile yarns of velvet upholstery fabric.

**Nonrenewable energy:** An energy source, such as oil or natural gas, or a natural resource, such as a metallic ore, that cannot be replenished or replaced after it has been used. [www.contract-textiles.com](http://www.contract-textiles.com)

**Occupational Safety & Health Administration: OSHA** [www.osha.gov](http://www.osha.gov)

**Organic:** fibres that have been grown without chemical fertilizers, pesticides, herbicides or fungicides.

**Ozone:** A bluish gas that is harmful to breathe. Nearly 90% of the Earth's ozone is in the stratosphere and is referred to as the ozone layer. Ozone absorbs a band of ultraviolet radiation called UVB that is particularly harmful to living organisms. The ozone layer prevents most UVB from reaching the ground. [www.contract-textiles.com](http://www.contract-textiles.com)

**PBDEs (Polybrominated diphenyl ethers):** are a group of chemicals that are used as flame retardants in polymer resins and plastics. Found in some furniture, TVs, stereos, computers, carpets, and fabrics, they are harmful to the environment, build up in living organisms, and last a long time in the environment. Recent studies using rodents provide evidence that exposure to PBDEs during critical growth periods may lead to behavioural disturbances and liver effects and can also interfere with the normal production of some thyroid hormones. The European Union and the U.S. Environmental Protection Agency (EPA) has banned some forms of PBDEs. [www.ec.gc.ca/cepaRegistry](http://www.ec.gc.ca/cepaRegistry) (Canadian Environmental Protection Agency)

**PFOA (Perfluorooctanoic Acid) (Teflon®):** also known as "C8" is a man-made chemical which does not occur naturally in the environment. It is used by companies, such as DuPont (Teflon®, Stainmaster®) and Scotchguard®, to make fluoro-polymers for use in non-stick cookware and all-weather clothing and stain repellent finish on textiles. The only company that manufactures PFOA in the United States is the DuPont company, though 3M also manufactured the acid up until the year 2002. The Environmental Protection Agency has been testing these products since the late 1990's and in 2005 initiated research on whether PFOAs are released over time as these products age and whether they cause systemic toxicity, developmental toxicity or carcinogenicity. The result is a Stewardship program commitment to reduce the use and emissions of PFOAs by 95% by 2010 and to eliminate them by 2015. [www.pfoa.com](http://www.pfoa.com) and [www.epa.gov/oppt/pfoa](http://www.epa.gov/oppt/pfoa)

**PFOS (perfluorooctane sulfonate) (Scotchgard™):** Scotchgard ingredients belong to a large family of chemicals that degrade to form a chemical called PFOS. They are fluorocarbons, related to CFCs, which are now banned as ozone depleters. 3M 'voluntarily' discontinued the production of this popular stain and water repellent chemical in talks with the US EPA (Environmental Protection Agency) in 2002.

It is believed that PFOS interrupts the body's ability to produce cholesterol, a necessary building block of nearly every system in the body. [www.chemicalindustryarchives.org](http://www.chemicalindustryarchives.org)

**Pilling:** is the formation of fuzzy balls of fiber on the surface of a fabric that remain attached to the fabric. [www.contract-textiles.com](http://www.contract-textiles.com)

**Polylactic acid (PLA):** A biodegradable thermoplastic derived from the lactic acid in corn; resembles clear polystyrene. PLA can be used in a number of industrial products including textiles and carpeting. [www.contract-textiles.com](http://www.contract-textiles.com)

**Plastic:** Any of various organic compounds produced by polymerization, capable of being molded, extruded, cast into various shapes and films or drawn into filaments used as textile fibers. [www.contract-textiles.com](http://www.contract-textiles.com)



**Polyethylene terephthalate (PET):** A thermoplastic material that is clear, tough and has good gas and moisture barrier properties. Used in soft drink bottles and other blow molded containers, although sheet applications are increasing. Cleaned, recycled PET flakes and pellets are used in some spinning fiber for carpet yarns, fiberfill and geo-textiles. Other applications include strapping, molding compounds and both food and non-food containers. [www.contract-textiles.com](http://www.contract-textiles.com)



**Polyvinyl chloride (PVC) (Vinyl):** Synthetic thermoplastic polymer made from vinyl chloride. In addition to its stable physical properties, PVC has excellent transparency, chemical resistance, long-term stability, good weatherability, flow characteristics and stable electrical properties. However, its stability makes it nearly environmentally indestructible. PVC also releases hydrochloric acid and other toxic compounds when produced, used or burned. [www.contract-textiles.com](http://www.contract-textiles.com) Upholstery fabrics are known as vinyl. Crypton Green is a preferred alternative.

**Post-consumer:** An adjective used to describe all or part of a consumer product that has reached the end of its useful life in that form. [www.contract-textiles.com](http://www.contract-textiles.com)

**Post-consumer recycling:** The recycling of materials generated from residential and consumer waste for use in new or similar purposes, such as converting wastepaper from offices into corrugated boxes or soda bottles into polyester fiber. [www.contract-textiles.com](http://www.contract-textiles.com)

**Recycled Cotton:** Cotton fabric which has been made from recovered cotton and would otherwise be cast off during the spinning, weaving or cutting process. [www.robertallendesign.com](http://www.robertallendesign.com)

**Recycled Polyester:** Yarns made from post-consumer and post-industrial polyester waste. Post consumer polyester is made from waste left over once a product has been used by a consumer. Post industrial polyester is from waste generated by an industrial process before the polyester has been used by a consumer. Recycled polyester lessens our dependence on oil, reduces waste and produces less pollution. [www.robertallendesign.com](http://www.robertallendesign.com)

**Recycled product:** A product made in whole or part from material recovered from the waste stream. [www.ofee.gov/eo/greening.pdf](http://www.ofee.gov/eo/greening.pdf) (pp. 14-15)

**Recycled Silk:** Silk yarn/fabric waste from industrial weaving mills. [www.robertallendesign.com](http://www.robertallendesign.com)

**Recycling:** The series of activities, including collection, separation and processing, by which products or other materials are recovered from the solid waste stream. The products are then used in the form of raw materials in the manufacture of new products, other than fuel for producing heat or power by combustion. [www.ofee.gov/eo/greening.pdf](http://www.ofee.gov/eo/greening.pdf) (pp. 14-15). For this to be significant, a description of what is recycled and the percentage is required.

**Renewable:** Capable of being replaced by natural ecological cycles or sound management practices. [www.contract-textiles.com](http://www.contract-textiles.com)

**Renewable energy:** Energy derived from sources that do not become depleted such as the sun, wind, oceans, rivers, eligible biomass and heat from the earth's interior. [www.contract-textiles.com](http://www.contract-textiles.com)

**Reusable:** Capable of being used again after salvaging or special treatment or processing. [www.contract-textiles.com](http://www.contract-textiles.com)

**Seam Slippage:** is the movement of yarns in a fabric that occurs when it is pulled apart at a seam. [www.contract-textiles.com](http://www.contract-textiles.com)

**Solid waste:** Non-liquid, non-soluble materials from sources ranging from municipal garbage to industrial wastes that may contain complex and hazardous substances. Solid wastes also include sewage sludge, agricultural refuse, demolition wastes and mining residues. Technically, solid waste also refers to liquids and gases in containers. [www.contract-textiles.com](http://www.contract-textiles.com)

**Solution Dyed:** means that color is added to the fibers while they are in a liquid state during the yarn manufacturing process. The color is integrated into the very fiber, which is why the fabric can be cleaned with bleach and still retain the color. Think of the analogy of a carrot and a radish; the color in the carrot is throughout, while the color on the radish lies on the outer surface. The carrot would represent a solution dyed fiber. [www.bella-dura.com](http://www.bella-dura.com)

**Sustainable:** a method of harvesting or using a resource so that the resource is not depleted or permanently damaged. [www.contract-textiles.com](http://www.contract-textiles.com) rapidly renewable

**Sustainable product:** A product that has no negative impact on natural ecosystems or resources. [www.contract-textiles.com](http://www.contract-textiles.com)

**Sustainable manufacturing:** Manufacturing processes that have no negative impact on natural ecosystems or resources. [www.contract-textiles.com](http://www.contract-textiles.com)

**U.S. Green Building Council:** A coalition of representatives from the building industry that promotes buildings that are environmentally responsible, profitable and are healthful places to live and work. [www.usgbc.org](http://www.usgbc.org)

**Silk:** is a natural protein fibre extruded from a silkworm in its pupae stage of its lifecycle. It is lustrous, elegant, and very drapable, but lacks ability to resist sun damage. Depending on the weave, it may be flame retardant.

**Volatile Organic Compound (VOC):** Compounds that contains carbon and become a gas at room temperature. VOC emissions are regulated because they contribute to smog formation. The most common sources of VOC emissions are from storage and use of liquid and gaseous fuels, the storage and use of solvents and the combustion of fuels and can include housekeeping and maintenance

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products and building and furnishing materials. In sufficient quantities VOC emissions can cause eye, nose, and throat irritations, headaches, dizziness, visual disorders, memory impairment; some are known animal carcinogens; some are suspected or known human carcinogens. [www.contract-textiles.com](http://www.contract-textiles.com)

**Wool:** is a natural protein fibre from the fleece of sheep and other related animals. It is warm, absorbent and can be inherently flame retardant depending on the tightness of the weave and how much lanolin has been left on the fibers.. Sheep are shorn 1-2 times per year, making wool sustainable.

To book Dayle to speak to your group about sustainable fabrics, contact the office at [info@daylelaing.com](mailto:info@daylelaing.com)