

www.daylelaing.com

This carpet and rug glossary definitions has been adapted in whole or part from the websites listed in definition. It is not intended to be a rigorous review of the literature, but a guide to explaining terms in common use.

'All natural': a vague and misleading term since arsenic, asbestos, uranium, lead, mercury and formaldehyde are naturally occurring elements. www.terrachoice.com

Aloe: from the aloe plant which yields cellulose fibers 3 to 5 feet long, which are similar to sisal but weaker and more elastic. It is used as an accent in rugs for texture.

'Art Silk': an unofficial term, it means the fiber content is <u>likely</u> mercerized cotton. This imparts a gloss to the rug that contrasts to the relatively less shiny wool, so like silk, it can be used in the pile for design definition and accents. Alternatively, it may be rayon. www.jacobsenrugs.com

Aubusson - Aubusson rugs were originally flat-woven tapestries made in France. The designs are now mostly made in China and India and are hand-carved, creating an embossed look. They have a traditional look and feel. www.arearugfacts.com Aubussons were first created in the ateliers of Louis XIV during the French Baroque period during the 17th century.

Axminster: Axminster rugs are woven on a jacquard loom, have a stiff backing and a soft, colorful pile and usually contain a complex pattern. Axminster is named after the town in England where these rugs were first produced. Axminster rugs must be rolled length-wise. www.arearugfacts.com

Beater Bar: power assisted rotating vacuum brush head that does a superior job of removing dirt from machine made rugs, but can destroy hand knotted rugs by loosening and pulling out the knots, resulting in destroyed pile.

Biodegradable: a product can be decomposed or metabolized by microorganisms and reduced to organic or inorganic nutrients for further use. www.contract-textiles.com

By-product: A secondary product of an industrial or biological process. www.contract-textiles.com

Carpet: Although often used interchangeably with the term 'rug' by some, our industry commonly uses the term carpet to refer to wall-to-wall broadloom, while 'rug' refers to an 'area rug' which is used over another type of solid surface flooring.

Certified Organic: Natural fibers that have been grown according to strict uniform standards that are verified by an independent organization. www.robertallendesign.com

'Chemical Free': a vague and misleading term since water is a chemical; so is oxygen. www.terrachoice.com

Closed Loop: A type of manufacturing process that utilizes a cyclical material flow in order to minimize waste. www.contract-textiles.com The resulting recycled products should not suffer from lack of quality. Some manufacturers have programs so that old carpet is not 'downcycled' to carpet backing, but used to make new carpet. http://shawfloors.com

Colourfast: A material's degree of resistance to the fading effect of light. 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 Rugs made from cellulose or animal fibers, with 100% organic content can be composted at the end of their useful life.

Cotton: is a natural cellulose fibre 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 like fertilizer, relying instead on methods with less ecological impact, such as crop rotation. www.robertallendesign.com Cotton is often used as the base of a hand woven rug, comprising the warp yarns and the fringe.



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 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



CRI: Carpet and Rug Institute is an American national trade association representing carpet and rug manufacturers and suppliers of raw materials and services to the industry. It is the leading source for science-based information and insight on how carpet and rugs create a better environment indoors. See Green Label & Green Label Plus for ratings. www.carpet-rug.org



CRI Seal of Approval: is the Carpet and Rug Institute program that tests the effectiveness of carpet cleaning products and equipment, and certifies that they remove difficult stains or a sufficient amount of soil without damage to the carpet. The program uses x-ray fluorescence (XRF) technology to measure precisely how much soil a deep cleaning extractor removes from a carpet sample. There are bronze, silver and gold levels. www.carpet-rug.org

Chromium Dyes: In the 1920s and 1930s, chromium (as called chrome or chromate pigment) dyes became a more reliable alternative to aniline. These synthetic dyes have a much wider spectrum of colours (600) from which to choose than vegetable dyes. www.arearugfacts.com The International Agency for Research on Cancer (IARC), has concluded that chromium VI (hexavalent) is a Group 1 carcinogen to humans and cause cancer of the lung. https://monographs.iarc.fr/ENG/Monographs/vol100C/mono100C-9.pdf Workers in the dyeing sector of the industry need to take precautions when handling chromium, and the waste effluent needs to be treated. See "Heavy Metal". See "ETAD" for trace amounts of chromium allowable. Metallic chromium and chromium III are Group 3, not classifiable as to carcinogenicity to humans. http://monographs.iarc.fr/ENG/Monographs/vol49/mono49-6.pdf

Downcycling: recycling synthetic fibres into a product of lesser quality. www.mbdc.com An example is recycling nylon carpet pile into carpet backing.

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



EcoLogo – a North American multi-attribute environmental standard and certification mark, providing scientific proof of environmental leadership, and based on the lifecycle of a product or service. It was founded in 1988. It provides public and corporate customers and consumers with assurance that the products and services bearing the logo meet stringent environmental standards that have been verified by a third party auditor. By certifying environmental leaders in over 120 product categories, EcoLogo helps customers find greener products. One of two North American eco-labelling programs

approved by GEN (Global EcoLabelling Network), it meets internationally recognized ISO 14024 requirements. www.ecologo.org

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 (Source: ACT) There is also a Canadian Environmental Protection Agency called CEPA. http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=D44ED61E-1



ETAD: Ecological and Toxicological Association of Dyes and Pigments Manufacturers – is an international organization, formed in 1974, that seeks to base its positions on sound science. They coordinate efforts of members to minimize any possible adverse impact of organic colorants on health and the environment. Member companies are obliged to adhere to the code of ethics, which is based on the principles of responsible care. They must also comply with all national and

international chemical regulations. There are voluntary regulations for classification and labeling of chemicals, and education programs. Trace amounts of heavy metals allowed: Antimony: 50ppm, Arsenic: 50ppm, Barium: 100ppm, Cadmium: 20ppm, Cobalt: 500ppm, Copper: 250ppm, Chrome: 100ppm, Iron: 2500ppm, Manganese: 100ppm, Nickel: 200ppm, Mercury: 4ppm, Selenium: 20ppm, Silver: 100ppm, Zinc: 1500ppm, Tin: 250ppm, Lead: 100ppm. www.etad.com

Fibre blends: "Mixtures of materials both technical (synthetics fibres) and biological (natural fibres), neither of which can be salvaged after their current lives." <u>Cradle to Cradle</u>, p. 99 The problem is that blends can only be landfilled.

Formaldehyde: is used in textile production as a cross-linking agent to make fabric wrinkle resistant and soil releasing. Hatch KL. (1993) Textile Science, p.418. Formaldehyde is limited to 300mg/kg for decorative textiles and 75mg/kg for materials that come into direct contact with skin, for the Öeko-tex standard-100. http://www.oeko-tex.com/OekoTex100 PUBLIC/index.asp Formaldehyde is a Group 1 carcinogen to humans according to the World Health Organization's International Agency for Research on Cancer (IARC). http://monographs.iarc.fr/ENG/Monographs/vol88/index.php

Green: A general word used to describe something that is thought to be beneficial to the environment. www.terrachoice.com To convey meaning, 'green' must have more description and be precisely defined.

Greenhouse gas (GHG): 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

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Green Label & Green Label Plus: is a voluntary industry testing program for carpet, cushion and adhesive products, that establishes the highest standard for indoor air quality (IAQ). The Carpet and Rug Institute (CRI) created this program for testing by an independent, certified laboratory, meeting stringent criteria for low chemical emissions, as designated by ANSI and the EPA. Products are subject to annual testing and require a chain of custody process. The Green Label Plus expands the annual tests for specific "chemicals of concern", quarterly testing for VOCs and an annual audit of the testing laboratory. www.carpet-rug.org

Greenpeace Pyramid of Plastics: Greenpeace is a not-for-profit environmental organization that does research on environmental issues. Their Pyramid of Plastics article explains the relative toxicity of various plastics used in the textile and carpeting industry. www.greenpeace.org

Greenwashing is the act of misleading consumers regarding the environmental benefits of a product or service, or the practices of the company. www.terrachoice.com

Hand Knotted Rugs: rugs that are hand made by knotting techniques. The rug consists of warp yarns held tautly on a loom forming the length of the rug, and weft yarns which are inserted between the rows of knots. The knots are yarns hand-tied around two adjacent warp yarns, which are then cut to form the rug pile. www.nejad.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 Examples of natural ingredients that may 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 fiber from inside the stalk of a tall plant. Little water and little or no pesticides are used in the farming of hemp, and the plant replenishes soil with nutrients and nitrogen. Hemp does not contain sufficient quantities of the cannibus active ingredient THC (tetrahydrocannabinol) and that is why it is permitted for growing in Canada. The texture similar to linen and hemp is used for textural accents in rugs. Hemp is also used by some manufacturers as an all natural primary backing, due to its durability, strength, and mold and mildew resistance. www.earthweave.com



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

ISO 14001: ISO standards and guidelines that provide principles and procedures for environmental labeling. ISO 14001 pertains to environmental issues. www.iso.ch

ISO 14024: specifically pertains to environmental labeling. www.iso.ch

Kilim: are flat tapestry-woven carpets or rugs. The name 'kilim' or 'kelim' is Turkish, and comes from the Persian gelim 'to spread roughly'. www.wikipedia.com

Knot Density: A large part of a hand-knotted rug's value is placed on how many knots there are in one square inch. Knots-per-square inch ranges from 40 up to 2,000. 160 knots per square inch is considered very good, 400 knots per square inch is extraordinary, and 1,000 knots per inch or more is very rare. It is tricky to figure out the number of knots per square inch because it depends on whether or not the knots were tied on the same plane. If they were tied on the same plane, one knot shows on the back of the rug like two knots. If the knots were tied onto two different planes, each single bump or node is counted as a knot. The best way to judge the number of knots per square inch is by looking at the colors. If there are single colored nodes, then count each node as one knot. If the colored nodes are appearing in pairs, then count two nodes as one knot. www.arearugfacts.com



LEEDTM- 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 There are Councils around the world and a Canadian GBC with chapters across Canada. www.worldgbc.org

LEED Accredited Professional (AP): The LEED Professional Credentials (LEED AP and Green Associate) are professional designations for those who have demonstrated a thorough understanding of green building techniques, environmental issues, the LEED program and the certification process. The LEED credentials show differentiation in a growing and competitive industry and allow for varied levels of specialization. https://www.usgbc.org/

Linen: A natural cellulose fibre taken from the inside of the flax plant stalks. Fibers are very strong, have excellent sun resistance, but lack flexibility. Linen is used as an accent in rugs for its texture and appearance.

MBDC - McDonough Braungart Design Chemistry: 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 3rd 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

Mercerization: is the addition of caustic soda (sodium hydroxide or liquid ammonia) to cotton to plump and straighten the fiber. Mercerization improves the strength, the dyeability, the luster and preshrinks the fiber – all of which improve the quality of cotton. Workers need precaution regarding inhaling the fumes.



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 corporate logos. www.terrachoice.com

Nettle: is an interesting alternative cellulose fiber handspun by families in Nepal through cottage industries producing a rugged fiber similar to linen. The Himalayan Giant Nettle plant resists disease and pests. This is used as a textural accent in rugs.

'Non-toxic': a vague and misleading term. Salt is toxic if you ingest too much. www.terrachoice.com

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. The earth's supply is finite. www.contract-textiles.com

Nylon: a synthetic fiber (a polymer from petroleum products) which has excellent resiliency and is very durable. It has been the residential and commercial fiber of choice for broadloom carpet for several decades, and is available in area rugs as well. Some manufacturers have closed-loop recycling programs and offer return shipping programs throughout USA. www.shawfloors.com

Olefin: is a synthetic fibre that has a simple polymer structure, and the highest potential for mechanical recycling. http://archive.greenpeace.org/toxics/pvcdatabase/bad.html There are two types: polypropylene (PP) and polyethylene (PE), which are both usually solution dyed and therefore colourfast, and bleach cleanable. Joseph ML. (1972) Introductory Textile Science, pp.151. It is a strong fiber, colorfast, resistant to mildew and quick drying. Olefin area rugs are lightweight and inexpensive, but do not hold up well in high-traffic areas. www.arearugfacts.com Since the resilience is generally less than that of wool or nylon, the pile is usually kept short and looped in what are described as 'berbers'

Organic: fibers that have been grown without chemical fertilizers, pesticides, herbicides or fungicides. www.robertallendesign.com

Patina: is an aged or faded look. www.arearugsfacts.com It can be achieved by actual aging, or artificially by washing with tea.

Persian Knot: Also known as the Senneh knot, the Persian knot is asymmetrical. The knot is open to one side. The benefits of this knot are that it does not leave gaps and it is less bulky than the Turkish knot. Persian knots makes better curvilinear or floral patterns. Countries that use the Persian knot are: Iran, Afghanistan, Pakistan, India, Nepal, Tibet and China. www.arearugfacts.com

Polyester: a synthetic polymer from petroleum products which is less resilient and durable than nylon for rug use. Most virgin polyester uses the heavy metal antimony in the production. Recycled polyester uses yarns made from post-consumer and preconsumer (post-industrial) polyester waste and lessens our dependence on oil, reduces waste and produces less pollution. www.mbdc.com



Polyethylene terephthalate (PET) or (PETE): 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. <a href="https://www.contract-polyethylene

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

Polypropylene: see Olefin

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

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 For significance, a description of what is recycled and percentage is required.

Renewable: Capable of being replaced by natural ecological cycles or sound management practices. www.contract-textiles.com See Sustainable.

Reusable: Capable of being used again after salvaging or special treatment or processing, www.contract-textiles.com

Silk: is a sustainable natural protein fiber extruded from a silkworm in its pupae stage of its lifecycle. It is lustrous, elegant, and very strong, but lacks ability to resist sun damage. It can be used with wool to add definition and to outline designs with its luster. The cost is obviously much more if the base is silk instead of wool or cotton, and even more if all the pile is all silk.

Sisal: an inexpensive cellulose fiber taken from the foliage of the sisal(ana) plant and used for its rough texture and economy. To soften the feel, it is sometimes blended with wool.

Solution Dyed: means that color is added to the fibres while they are in a liquid state during the yarn manufacturing process. The color is integrated into the fibre, 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 fibre. 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 Rapidly renewable in 10 years or less. www.cagbc.org

Sustainable manufacturing: Manufacturing processes that have no negative impact on natural ecosystems or resources. www.contract-textiles.com

Terrachoice: is a science-based environmental marketing agency that has conducted greenwashing research and published their results in "The Sins of Greenwashing Home and Family Edition 2010". They are part of the UL Global Network.

<u>www.terrachoice.com</u>

Third Party Research: independent assessment of the complete manufacturing process of a product and the processes used to create it. The resulting certification is granted to companies displaying multiple attributes rather than a single attribute. www.mbdc.com

Triexta: a new generic fibre as of March 2009, composed of polytrimethylene terephthalate (PTT), a subclass of polyester. Although it has the same general composition as the established generic fibre category polyester, it claims to have superior durability, resilience, stretch & recovery, softness, UV resistance and is inherently stain resistant. www.centexbel.be/nl/lexicon Triexta fibres from some manufacturers are combined with 37% corn (see PLA) to lower the non-renewable component of the fibre. www.2.dupont.com/sorona

Tufting Gun - tool used to push the yarn back and forth through the backing of hand-tufted rug. www.arearugfacts.com

Turkish Knot: Also known as the Ghiordes knot, the Turkish knot is symmetrical. You can identify it when you see two little bumps or nodes within one knot on the back of the rug (also known as a double knot). Countries that use the Turkish knot include: Turkey, Armenia, Azerbaijan and northwestern Iran. www.arearugfacts.com

Vegetable dyes: are dyes from natural sources, mainly plants. Because chemically they are not as pure as synthetics, the eye perceives more variability making them appear softer, more muted.

Vegetable dyed rugs age gracefully fading slowly and developing a patina. There is considerable skill in mixing dyes to create the color palette, a skill that is passed on through the generations. www.arearugfacts.com

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 products and building and furnishing materials. www.contract-textiles.com VOCs account for the 'off-gassing we associate with new materials. VOC emissions can cause eye, nose, and throat irritations.

https://gupea.ub.gu.se/dspace/bitstream/2077/4199/1/ah1998 04.pdf Thirty three VOCs are cited by the Center for Disease Control and the International Agency for Research on Cancer (IARC) has classified 1,4-dichlorobenzene (one VOC) as a possible human carcinogen. http://www.cdc.gov/exposurereport/pdf/FourthReport.pdf

Wool: is a natural protein fiber from the fleece of sheep and other related animals. It is durable, resilient and can be cleaned and can be inherently flame retardant depending on the tightness of the weave and how much lanolin has been left on the fibers. The resilience makes up for the low strength. Sheep are shorn 1-2 times per year, making wool sustainable.

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Dayle Laing, B.A.Sc. in Consumer Studies, Dip. Interior Design, LEED Accredited Professional, taught Interior Design at Sheridan College for 19 years. Her paper, "The Greening of Healthcare: Fabrics used in Health Care Facilities" was published in the Journal of Green Building, Fall 2011, and the scientific poster and abstract were presented at an Inflammopharmacology Conference at Cambridge University in July, 2011. She presented this research at the EcoCare healthcare conference in London, Ontario in October, 2010. Three of her seminars are accredited by IDCEC for continuing education credits for Interior Designers across North America. Dayle was keynote speaker at Earth Matters Day at Sunnybrook Health Sciences Centre in 2011. In the past, Dayle had a successful career in sales and sales management in the pharmaceutical industry. Her clients include corporations for speaking engagements and consultation on their issues of sustainability. For more information about how Dayle can help you with your requirements, please contact the office at 905-846-3221 or info@daylelaing.com



We motivate people to select the 'coolest shade of green' for beautiful sustainable interior design that enhances their body, mind & spirit.

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