



www.daylelaing.com

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



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

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



ANSI: American National Standards Institute is a US based not-for-profit institution founded in 1918. It is the voice of the U.S. standards and conformity assessment system and empowers its members to strengthen the U.S. marketplace position in the global economy while helping to assure the safety and health of consumers and the

protection of the environment. The Institute oversees the creation, promulgation and use of thousands of norms and guidelines that directly impact businesses in nearly every sector. ANSI is also actively engaged in accrediting programs that assess conformance to standards – including globally-recognized cross-sector programs such as the ISO 9000 (quality) and ISO 14000 (environmental) management systems. www.ansi.org

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



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 a Carpet and Rug Institute program that tests the effectiveness of carpet cleaning products 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

'Chemical Free': a vague and misleading term since oxygen is a chemical. 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>

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



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 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

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. <http://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.mbd.com

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

Ecolabelling: is a voluntary method of environmental performance certification and labelling that is practiced around the world. An "ecolabel" is a label which identifies overall environmental preference of a product or service within a specific product/service category based on life cycle considerations. In contrast to "green" symbols or claim statements developed by manufacturers and service providers, an ecolabel is awarded by an impartial third-party in relation to certain products or services that are independently determined to meet environmental leadership criteria. www.globalecolabelling.net



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 by Environment Canada. 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. EcoLogo is a label plus a marketing program to build market share for the world's most sustainable 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



Energy Star: is a joint program of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy to save money and protect the environment through energy efficient products and practices. The program also exists in Canada. In 1992, it was introduced as a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. Computers and monitors were the first labeled products. Through 1995, EPA expanded the label to additional office equipment products and residential heating and cooling equipment. In 1996, EPA partnered with the US Department of Energy for particular product categories. The ENERGY STAR label is now on major appliances, office equipment, lighting, home electronics, and more. EPA has also extended the label to cover new homes and commercial and industrial buildings. www.energystar.gov

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 our 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 (synthetic fibres) and biological (natural fibres), neither of which can be salvaged after their current lives." *Cradle to Cradle*, p. 99 The problem is that blends can only be landfilled.

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 www.ecojustice.ca (formerly Sierra Legal Defense Fund) Placing a barrier of inherently flame-resistant material between the exterior fabric and the foam increases flame-retardancy. (eg. Kevlar flame blocker)



FSC: Forest Stewardship Council - is an international certification and labeling system that guarantees that the forest products come from responsibly managed forests and verified recycled sources. Forests are certified against a set of strict environmental and social standards, and fibre from certified forests is tracked all the way to the consumer through the chain of custody certification system. Independent third-party auditors conduct all FSC certification audits. www.fscscanada.org

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>



GEN: Global Ecolabelling Network is a not-for-profit association of third-party, environmental performance recognition, certification and labelling organizations founded in 1994 to improve, promote, and develop the "ecolabelling" of products and services. www.globalecolabelling.net GEN was founded by Green Seal and the Canadian Environmental Choice program, EcoLogo. www.greenseal.org



GOTS: Global Organic Textile Standard – an international independent certification for organic textiles which prohibits substances such as: aromatic solvents, phenols, complexing agents, formaldehyde, fungicides, biocides, halogenated solvents, fluorocarbons, quaternary ammonium compounds, or bio-accumulative substances. All treatment wastewater must be treated. Heavy metals are limited to the trace values allowed by ETAD. www.global-standard.org

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.



Greenguard: is an industry-independent, third-party indoor air quality certification program for low-emitting products and materials, started in 2002. To date, more than 170 manufacturers across various industries offer GREENGUARD Indoor Air Quality Certified® Products. The GREENGUARD Environmental Institute (GEI) became an authorized national standards developer by the American National Standards Institute (ANSI). www.greenguard.org

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



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



Green Seal: is an independent not-for-profit organization that uses science-based standards and the power of the marketplace to create a more sustainable world. It meets the criteria of ISO 14020 and 14024 for eco-labelling standards, and the EPA's standards for 3rd party certifiers. www.greenseal.org

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

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 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.



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. ISO 14001 pertains to environmental issues. 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



LEED™- Leadership in Energy and Environmental Design: A point-based rating system developed by The U.S. Green Building Council (USGBC) Rating System for Sustainable Development to assess new and existing commercial buildings for a variety of earth-friendly features. www.usgbc.org There is also a Canadian Green Building

Council with chapters across Canada and chapters around the world. CaGBC has different standards for LEED™ due to unique features of Canadian climate. www.worldgbc.org This system has been expanded recently to include certification for residential homes.

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. <http://www.usgbc.org/>

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

McDonough, William: American Architect, co-founder of MBDC, co-author of 'Cradle to Cradle', and author of the **Hannover Principles**, presented at the Hannover World Fair Expo, 2000. The 9 principles are: **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.** Rely on natural energy flows; **8.** Understand the limitations of design; **9.** Seek constant improvement by sharing of knowledge. www.mcdonough.com 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.

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

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



ÖEKO-TEX® - a European 3rd party certification organization that tests fabrics for harmful substances such as formaldehyde, heavy metals, pesticides, phthalates, PFOS, PFOA, toxic dyes, chlorinated benzenes and toluenes. (O in Oeko is silent) www.centexbel.be

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

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

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) have banned some forms of PBDEs. 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 to make fluoro-polymers for a stain repellent finish on textiles. The only company that manufactures PFOA in the United States is DuPont, 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 and 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 stain and water repellent chemical in talks with the US EPA 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

Perfection: what we cannot expect right now! This is a continuum that we move along as we encourage manufacturers to improve their products and their processes. So there is no perfect product now and there may never be in absolute terms. The goal is to produce products that move from 'Cradle to Cradle' without ever producing waste, in a closed loop system. www.mbdc.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

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

Polyester: a synthetic polymer from petroleum products. Most virgin polyester uses the heavy metal antimony in the production, although this is not required. Recycled polyester uses yarns made from post-consumer and post-industrial polyester waste and lessens dependence on oil, reduces waste and pollution. www.mbdc.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, recycled polyester and geo-textiles. Other applications include strapping, molding compounds and both food and non-food containers. 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, and flow characteristics. 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 Upholstery fabrics are known as vinyl. Preferred alternative fabrics are waterproof, stain-resistant and 3rd party certified.

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 (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

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

Reusable: Capable of being used again after salvaging or special treatment or processing. 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

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 very 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 product: A product that has no negative impact on natural ecosystems or resources. www.contract-textiles.com



Sustainable Furnishings Council: SFC is a not-for-profit association founded at High Point, NC in 2006 to promote sustainable practices among manufacturers, retailers, and consumers. It recognizes the overwhelming scientific consensus that our world is experiencing dangerous global climate change. Members acknowledge the tremendous urgency, and voluntarily take immediate steps to minimize carbon emissions, waste stream pollutants, un-recyclable content and primary materials from unsustainable sources from any product under their control. SFC members utilize Life Cycle Assessment as the best method for analyzing the environmental impact of their products, and a verifiable chain of custody as the only acceptable method for tracking wood flow. They support the triple bottom line of People - Planet - Profits and lead the industry in developing awareness of best practices throughout their supply chains. Members accomplish this goal by increasing their purchases from suppliers that show continual improvement toward meeting high standards. www.sustainablefurnishings.org

Terrachoice: is a science-based environmental marketing agency that has conducted greenwashing research and published their results in "The Six Sins of Greenwashing". They offer consultation and manage Environment Canada's EcoLogo program. www.terrachoice.com

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.mbd.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. Certification – see LEED™. There are now residential standards. www.usgbc.org There is also a Canadian Green Building Council (CaGBC). www.cagbc.org

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>

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

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