

WE LEAD.
WE LEARN.



ENVIRONMENTAL GLOSSARY



UPM RAFLATAC

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At UPM Raflatac, we believe that the fundamental purpose of our business is to provide our customers with continually improving products at competitive prices. However, we also understand that as a company, UPM Raflatac has responsibilities to the society in which we operate. We aim to meet and exceed our customers' expectations while also reducing our impact on the environment. In short, we are aiming for a sustainable future.

By combining the efforts of the entire labeling sector, together we can make a difference to our industry and our environment.

Good for business, good for the planet

We have developed this glossary to serve as your quick reference to certain environmental terms that you may encounter in your business practices.

UPM Raflatac. Pro Label. Pro Green.

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TERM	DEFINITION
Alternative energy	Although no standard definition exists, it is typically considered to be energy generated without the consumption of conventional fossil fuels. Wind, solar, geothermal and biomass are considered to be sources of alternative energy.
Alternative fuels	A term commonly used to describe transportation fuels. Vehicles powered by biodiesel, ethanol, electricity, hydrogen, natural gas or propane are considered to operate with alternative fuels.
Anthropogenic	Resulting from the influence of human beings on nature.
Biodegradable	The ability of an organic substance (such as plant or animal material) to be broken down by biological activity. Degradation can occur aerobically (with oxygen) or anaerobically (without oxygen).
Bisphenol A (BPA)	A chemical found in materials used to make plastic food and beverage containers and is suspected of being hazardous to humans. The Canadian government has initiated activities to prohibit the sale and importation of plastic baby bottles that contain BPA.
Canadian Environmental Protection Act (CEPA)	Beginning in December 2006, as part of CEPA, the Canadian government began collecting information on approximately 200 chemical substances regarded as being harmful to human health or the environment under a program known as the chemical 'Challenge'. This information will be used in risk assessment and product stewardship studies that may lead to additional regulation of certain chemicals and their uses in Canada.
Canadian Standards Association (CSA)	A recognized certification system for forest management and chain of custody programs. Used primarily in Canada.
Carbon dioxide (CO ₂)	A gas that occurs naturally in the atmosphere and is absorbed by plants. Burning fossil fuels converts the carbon in fuel sources extracted from beneath the Earth's surface into releases of carbon dioxide into the atmosphere.
Carbon footprint	Although no standard definition exists, it is commonly understood to mean the total quantity of greenhouse gas emissions produced directly and indirectly by an individual or organization, or by the production, use and disposal of a product.
Carbon neutral	Usually refers to a person or an organization achieving net carbon emissions of zero over a period of time. Emissions are offset by removing carbon from the atmosphere, storing carbon or avoiding carbon emissions typically by generating energy without consumption of fossil fuels.

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Carbon offset	A financial instrument aimed at a reduction in greenhouse gas emissions. One carbon offset typically represents the reduction of one metric ton of carbon dioxide or its equivalent in other greenhouse gases.
Carbon sequestration	Storage of carbon dioxide typically for the purpose of mitigating climate change. Carbon can be sequestered in trees or other plants. Work is advancing to capture carbon dioxide emissions from large industrial sources and store them underground in geologic formations like oil fields.
Chain of custody (forestry)	Process used to verify that a product carrying a forestry trademark, for example SFI®, PEFC or FSC, originated from a certified forest. To offer a product with the claim that it is made from certified wood, each processor of the wood product (or fiber) must maintain a third-party audited CoC system that requires the ability to track certified product through the manufacturing process.
Climate change	Often referred to as global warming, this is an increase in the Earth's average temperature, which in turn causes changes in climate. A warmer Earth may lead to changes in rainfall patterns, a rise in sea level and a wide range of impacts on plants, wildlife and humans.
Climate Registry (The)	A non-profit organization operating in North America that encourages early actions to increase energy efficiency and reduce greenhouse gas emissions. The registry is governed by US and Mexican states, Canadian provinces and Indian tribes. The Climate Registry establishes transparent standards for organizations to calculate, verify and publicly report their carbon footprint in a single, unified registry.
Composting	A biodegradation process usually considered to occur aerobically in which various wastes are broken down to become organic compost material that can be used as soil.
Cradle to cradle	A product design process that promotes the elimination of waste by recycling finished products, or easily disassembled parts of finished products, into new or similar products rather than creating waste. The design process often uses nature as a template to eliminate the concept of waste.
Cradle to grave	The product life cycle based on creating products from raw materials (cradle) and eventually disposing of them at the end of their useful lives in a landfill (grave).
Design for the Environment (DfE)	An EPA sponsored partnership program devoted to preventing the risk of pollution to people and the environment. DfE partnership projects focus on industries that have the potential for chemical risk reduction and improvements in energy efficiency coupled with a strong motivation to make lasting, positive changes. More information can be found at http://www.epa.gov/dfe/
Elemental chlorine free (ECF)	Wood pulp that is bleached using chlorine dioxide rather than elemental chlorine gas.
Ecosystem	The interaction between living things and their surroundings.
Embodied energy	The total energy necessary for an entire product life cycle including the energy required to make the product as well as the energy required to produce the raw materials used to make the product.
Emulsion adhesive	An adhesive in which the polymers and tackifiers are suspended in water. The water is driven off during the drying phase in the coating process.
Energy recovery	Commonly means recovering the energy in waste materials typically by incineration. This energy may be used to power a boiler or generate electricity.
Environmentally benign adhesive	See definition for recycling compatible adhesive (RCA).

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DEFINITION

Forest certification	Procedures developed by third-party organizations to assess the management of forest lands and award certifications to forest owners satisfying the established criteria. These procedures typically involve an evaluation of the environmental, economic and social aspects of the forest and forestry operations. Three well-known forestry organizations are the Sustainable Forestry Initiative® (SFI®), the Program for the Endorsement of Forest Certification (PEFC) schemes and the Forest Stewardship Council (FSC).
Forest Stewardship Council (FSC)	A non-profit, international organization devoted to encouraging responsible forestry management by offering forest certification programs to forest owners and chain of custody certification programs to secondary wood processors. The FSC logo may be displayed on products originating from certified forests and processed by CoC-certified companies.
Fossil fuels	Hydrocarbon fuels (coal, oil and natural gas) extracted from the Earth’s crust that were formed from the remains of plants and animals that lived millions of years ago.
Global warming	An increase in the average temperature near the surface of the Earth.
Green Seal	A non-profit organization founded in 1989 that develops ‘green’ standards for a wide variety of products. Evaluations are conducted from a life cycle perspective, meaning the organization considers each product’s environmental impacts including raw material extraction, manufacturing and processing, use and end-of-life disposal or recycling. Standards are developed in a transparent manner with input from a range of stakeholders such as manufacturers, the government, trade associations and academia. Once a standard is developed, manufacturers may seek Green Seal certification by demonstrating their products and operations meet the established criteria.
Greenhouse gases (GHG)	Gases that trap the heat of the sun in the Earth’s atmosphere, producing the greenhouse effect. The two major greenhouse gases are water vapor and carbon dioxide. Other greenhouse gases include methane, ozone, chlorofluorocarbons and nitrous oxide.
Greenwashing	Commonly describes the act of misrepresenting products or processes as environmentally friendly. See definition for the Seven Sins of Greenwashing.
Heavy metals	Toxic materials that have a very negative effect on the environment. Heavy metals include lead, arsenic, barium, cadmium, chromium, mercury, selenium and silver.
High density polyethylene (HDPE)	A type of plastic commonly used to make milk jugs and water bottles.
Hotmelt adhesive	A solid adhesive with no liquid content that is heated prior to coating so it will flow evenly onto the substrate being coated.
Incineration	Typically defined as combustion of waste or a ‘thermal treatment’.
ISO 9001:2008	An international standard for Quality Management Systems set by the International Standards Organization. It examines the systems and processes from receiving a customer order to delivery. The focus of the standard is on continual improvement processes. It can be integrated with other management systems, such as ISO 14001:2004, to assist in achieving economic and environmental goals.
ISO 14001:2004	An international standard for Environmental Management Systems (EMS) set by the International Standards Organization. The overall aim of ISO 14001:2004 is to support environmental protection and prevention of pollution in balance with competitive needs. It can be integrated with other management systems, such as ISO 9001:2008, to assist in achieving environmental and economic goals through a process of continual improvement.
Landfill	The disposal of waste into an approved site where it is placed into cells which are then capped with soil. Degradation is very slow.

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Life cycle analysis (LCA)	Often referred to as a cradle to cradle or cradle to grave assessment of the environmental impacts of a product or service.
Label Initiative for the Environment (L.I.F.E.)	A certification program offered by the Tag and Label Manufacturers Institute (TLM) for organizations involved in the label printing and converting industry. The L.I.F.E. program addresses four key elements: clean production, energy and greenhouse gases, product and environmentally preferable materials and management practices.
Lignin-free paper	Paper made from wood pulp from which lignin has been removed. Lignin degrades and discolors paper over time.
Low density polyethylene (LDPE)	A type of plastic commonly used to make plastic bags and six-pack soda can rings.
Materials recycling facility (MRF)	A facility that is set up to process residential recyclables including newspapers, other papers, cardboard, glass, plastic, steel and aluminum beverage containers.
Material safety data sheets (MSDS)	Documents required by the US Occupational Safety and Health regulations for hazardous chemicals produced or imported by chemical manufacturers and importers. Used to identify the chemical characteristics as well as the health and physical hazards of chemical products.
Mobius Loop	A symbol that consists of three chasing arrows that form a triangle. Commonly used to communicate that a product is recyclable or made from recycled materials.
Non-governmental organizations (NGO)	Typically private voluntary organizations focused on a cause or causes not involving the government, for example, Greenpeace.
Organic	Refers to living materials or being derived from living materials. In chemistry, refers to compounds containing carbon.
Ozone layer	A thin layer of ozone high in the atmosphere that protects the Earth from harmful ultraviolet radiation. Ozone formed at the ground surface from the reaction of air pollutants is not related to the protective ozone layer in the upper atmosphere.
Plastics	General name for a variety of materials made from long chains of carbon atoms derived almost exclusively from oil or natural gas.
Polyethylene terephthalate (PET)	A type of soft plastic typically used to make drink bottles and other food containers.
Poly-lactic acid (PLA)	A type of bioplastic made from renewable starch-like substances such as corn, beets or wheat. Paper and packaging made from PLA is biodegradable and breaks down readily in composting operations.
Polypropylene (PP)	A type of plastic commonly used to make yogurt containers and sheet protectors.
Polystyrene (PS)	A type of plastic commonly used to make cafeteria trays, egg cartons and styrofoam cups.
Polyvinyl chloride (PVC)	A type of plastic which contains chlorine. When burned, the chlorine is liberated and may combine with organic compounds in nature to form substances harmful to human health and the environment.
Post-consumer waste (PCW)	Waste produced by the end consumer of a material. Paper, cardboard, plastics, glass, steel and aluminum discarded by consumers may be diverted for recycling.

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Pre-consumer waste	Waste produced by the manufacturing process, including trimmings from paper production, defective aluminum cans, etc., that can be diverted and reused by another company to manufacture new products.
Product stewardship	Product-focused approach to environmental protection that considers the life cycle impact of a product, from the raw materials utilized to end-of-life disposal. Manufacturers play the most significant role in product stewardship by designing products that can be disassembled and recycled, that use fewer toxic components or require less energy to produce.
Programme for the Endorsement of Forestry Certification Schemes (PEFC)	A non-profit organization based in Switzerland and devoted to encouraging responsible forestry management by offering forest certification programs to forest owners and chain of custody certification programs to secondary wood processors. The PEFC logo may be displayed on products originating from certified forests and processed by CoC-certified companies. PEFC is also a global umbrella organization that assesses and recognizes national forest certification schemes, including SFI®, in North America.
Recyclable	Refers to products made of materials such as paper, plastic and glass that can be reprocessed into new materials rather than being disposed of as waste.
Recycled content	Refers to the amount of recycled materials in a product, usually measured as a percentage by weight. This may be pre- or post-consumer waste materials. Can also refer to the amount of wood fiber from post-consumer waste in a finished product.
Recycling compatible adhesive (RCA)	A pressure sensitive adhesive preferentially removed during the paper recycling process. Adhesives are determined to be RCAs in accordance with TLMI's RCA-LPR2 method, which is a protocol for the testing and qualification of post-consumer recycling compatible paper label products and pressure sensitive adhesives (PSAs) intended for use on paper to paper label products that are in conformance with Executive Order 13148 Section 702 'Greening the Government Through Leadership in Environmental Management – Environmentally Benign Adhesives'.
Registration, Evaluation, Authorization and Restriction of Chemical Substances (REACH)	A regulation enacted by the European Commission in June 2007 aimed at better protecting human health and the environment through better and earlier identification of the new intrinsic properties of chemical substances. REACH has a very wide scope and applies to all chemicals produced or imported into Europe unless specifically exempted.
Renewable energy	Energy that can be replenished in a short period of time. Usually considered to include biomass (wood and wood products), water, geothermal, wind and solar energy.
Renewable materials	Materials that can be replenished, such as agricultural products and water.
Reuse	Waste is reused for the same or a similar use without any physical changes.
RoHS	Part of the European WEEE directive regarding electrical and electronic equipment waste. Chemicals subject to RoHS regulation include lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl (PBDE) flame retardants.
Seven Sins of Greenwashing	<p>According to TerraChoice, this refers to seven practices that mislead consumers regarding the environmental practices of a company or the environmental benefits of a product or service.</p> <p>The Seven Sins of Greenwashing are as follows:</p> <ol style="list-style-type: none"> 1. Sin of the hidden tradeoff 2. Sin of no proof 3. Sin of vagueness 4. Sin of worshiping false labels 5. Sin of irrelevance 6. Sin of the lesser of two evils 7. Sin of fibbing <p>More information can be found at http://sinsofgreenwashing.org/</p>

TERM	DEFINITION
Silicones	Compounds that are coated in a thin layer on the liner component of pressure sensitive labelstock materials to aid release.
Solvent	General name for a substance that dissolves other substances. Many organic solvents, particularly VOCs, are known to have serious health risks and adverse impacts on the environment.
Source reduction	Any change in the design, manufacture or use of a material or product (including packaging) to reduce its environmental impact. Source reduction is the highest goal in the Reduce, Reuse, Recycle hierarchy.
Substances of very high concern (SVHC)	REACH regulations include a list of substances of very high concern that are regarded as having very serious and often irreversible effects on human health or the environment. The following chemical substances currently comprise the SVHC list of chemicals: Anthracene, 4,4'- Diaminodiphenylmethane, Dibutyl phthalate, Cobalt dichloride, Diarsenic pentaoxide, Diarsenic trioxide, Sodium dichromate, 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene), Bis (2-ethyl(hexyl)phthalate) (DEHP), Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified, Alpha-hexabromocyclododecan, Beta-hexabromocyclododecan, Gamma-hexabromocyclododecane, Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins), Bis(tributyltin)oxide, Lead hydrogen arsenate, Benzyl butyl phthalate and Triethyl arsenate. The updated list of SVHC substances can be reviewed at: http://echa.europa.eu/chem_data/candidate_list_en.asp
Sustainable Forestry Initiative® (SFI®)	A non-profit organization operating in North America and devoted to encouraging responsible forestry management by offering forest certification programs to forest owners and chain of custody certification programs to secondary wood processors. The SFI® logo may be displayed on products originating from certified forests and processed by CoC-certified companies. SFI® is endorsed by the European-based Programme for the Endorsement of Forestry Certification (PEFC) schemes.
Sustainable forest management	Management principles of a forest where trees are not harvested more than they grow. Sustainably managed forests maintain their biodiversity, productivity and regeneration capacity.
Sustainable Green Printing (SGP) Partnership	An independent recognition organization founded in 2007 by three trade/technical groups: the Printing Industries of America (PIA), the Flexographic Technical Association (FTA) and the Specialty Graphic Imaging Association (SGIA). Requirements include developing a sustainable policy, EHS regulatory compliance, developing a sustainability management system, adopting mandatory 'best practices', annual reporting and a commitment to at least one continuous improvement process per year.
Totally chlorine free (TCF)	Wood pulp that is bleached using hydrogen peroxide or ozone.
Tree-free paper	Paper made from fiber sources other than wood pulp including agricultural residues (sugar cane husks), fiber crops (hemp, kenaf, jute and flax), textile waste and wild plants (bamboo, grasses).
US Green Building Council (USGBC)	A non-profit organization founded in 1993 and dedicated to promoting the adoption of 'green' building practices and offering certification of buildings in accordance with their Leadership in Energy and Environmental Design (LEED) program.
Volatile organic compound (VOC)	A compound mainly generated when using organic, solvent-based products. The VOC emissions are involved in forming ozone at low levels in the atmosphere.



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