

Glossary of terms

Sustainable Development



LafargeHolcim

GENERAL TERMS

Alternative fuels and raw materials (AFR)

Inputs to clinker production derived from waste streams contributing energy and/or raw material.

Alternative raw materials

Materials and correctives, usually from industrial sources such as wastes or by-products of other industries to substitute, quarried natural raw materials and correctives.

Alternative raw materials rate

The percentage of virgin raw materials that are replaced with materials and correctives mainly from industrial sources such as wastes or by-products of other industries.

Cement

Cement is a building material made by grinding calcined limestone and clay to a fine powder. It acts as the binding agent when mixed with aggregates and water to make concrete.

Cements

Used as a normalizing factor, "Cements" is defined following the CSI definition: Total cements produced, excluding clinker sold, including clinker bought. It includes Portland, Blended, Slag cements and direct fly ash and slag sales.

Cementitious material or product

A substance which when mixed with water forms a paste that subsequently sets and hardens at room temperature. Used as a normalizing factor, "cementitious material" is defined following the CSI definition: Total clinker produced plus mineral components consumed for blending and production of cement substitutes, including clinker sold, excluding clinker bought.

Clinker

An intermediate product in cement manufacturing produced by decarbonizing, sintering, and fast-cooling ground limestone.

Clinker factor

The percentage of clinker in cement (according to the WBCSD-CSI Cement CO₂ and Energy Protocol).

Composite cement

Cement with a high percentage of secondary cementitious materials, such as slag and fly ash, replacing the clinker portion of the cement.

Concrete

A material produced by mixing cement, water and aggregates. The cement acts as a binder, and the average cement content in concrete is about 15%.

Co-processing

Using the cement manufacturing process to recycle, recover or treat waste, while simultaneously manufacturing cement in a single combined operation.

Fossil fuels

Non-renewable carbon-based fuels traditionally used by the cement industry, including coal and oil.

Kiln

Large industrial oven for producing clinker used in the manufacture of cement.

Mineral components (MIC)

Cement constituents which are not derived from clinker production. They include blast furnace slag, fly ash, natural pozzolan and limestone.

Ordinary Portland cement

Cement that consists of approximately 95% ground clinker and 5% gypsum.

Ready-mix concrete

Concrete is a well-dosed mix of cement, aggregates, water and admixtures. It is one of the most widely used building materials in the world.

Sustainable Procurement

A purchasing process that looks beyond the traditional economic parameters (price, quality, availability, functionality) and includes the life cycle of products, environmental aspects and social aspects, as an integral part of sourcing decisions.

Thermal Substitution Rate (TSR)

Proportionate heat substitution of traditional fossil fuel by using alternative fuels such as waste and biomass.

CO₂ EMISSIONS

Absolute gross emissions

The total amount of CO₂ emitted from production activities.

Absolute net emissions

Gross emissions minus credits for indirect savings. Compared with gross CO₂ emissions, net CO₂ emissions do not include CO₂ from alternative fossil fuels.

Specific gross emissions

The total amount of CO₂ emitted per tonne of cementitious material.

Specific net emissions

The net (gross emissions minus credits for indirect savings, such as use of alternative fuels) CO₂ emissions per tonne of cementitious material.

OTHER EMISSIONS**NO_x**

A generic term for the nitrogen oxides that are most relevant for air pollution, namely nitric oxide (NO) and nitrogen dioxide (NO₂). NO_x is formed in the combustion of nitrogen contained in the fuels as well as in conditions where nitrogen and oxygen are present at high temperatures as is the case in cement kilns.

SO₂

Sulfur dioxide. It is released naturally by volcanic activity and is also produced as a by-product of the burning of fossil fuels or natural raw materials containing sulfur compounds.

VOC

Volatile Organic Compounds. These are organic chemicals that have a high vapor pressure at ordinary room temperature. Their high vapor pressure results from a low boiling point, which causes large numbers of molecules to evaporate or sublime from the liquid or solid form of the compound and enter the surrounding air, a trait known as volatility.

AGGREGATES**Aggregates**

Quarried materials (crushed stone, gravel and sand) are the main component by volume of concrete. Aggregates are mainly used in the following construction sectors: manufacture of ready-mix concrete, concrete goods and asphalt as well as for roadbeds and railway fundamentals.

Construction and Demolition Waste (CDW)

CDW arises from activities such as the construction and maintenance of buildings and civil infrastructure, total or partial demolition of buildings and civil infrastructure. It consists of numerous materials, including concrete, bricks, gypsum, wood, glass, metals, plastic, asbestos and excavated soil, many of which can be recycled.

Recycled aggregates

Recycled aggregates come from reprocessing materials that have previously been used in construction. Examples of recycled aggregate

include recycled concrete from construction and demolition waste material and railway ballast.

Secondary aggregates

Secondary aggregates are usually by-products of other industrial processes that have not previously been used in construction. Examples of manufactured secondary aggregates are pulverised fuel ash and metallurgical slags. Natural secondary aggregates include china clay stent and slate aggregate.

WASTE**Hazardous waste**

Hazardous waste comprises all forms of solid or liquid waste (excluding wastewater) as defined by the legislation in the country in which a site operates.

Typical waste streams are:

- Waste oil, used oil filters, greases etc.
- Oil/water separator content, other sludges containing oil or other dangerous substances (tank bottom sludges i.e.)
- Fluorescent lamps and tubes
- Chemicals, paints, solvents, cleaning products
- e-waste
- Lab waste
- Asbestos-containing materials
- Gravel or soil contaminated with dangerous substances such as hydrocarbons.

Non-hazardous waste

Non-hazardous waste comprises all forms of solid or liquid waste (excluding wastewater) as defined by the legislation in the country in which a site operates.

Typical waste streams are:

- Demolition waste, bricks, dusts etc.
- Non-hazardous waste similar to municipal waste
- Other non-hazardous waste.

SUSTAINABLE CONSTRUCTION**2030 Solutions**

A portfolio of product and services with enhanced sustainability performance.

2030 Solutions are reported as a percentage of net sales.

Key categories for 2030 Solutions are Affordable housing, Water & biodiversity, Energy efficiency, Circular economy, Resource efficiency, Low carbon materials & solutions, and Life cycle transparency & responsible sourcing.

Sustainable construction

A building or construction that is environmentally responsible and resource efficient throughout its life-cycle from design to construction, operation, maintenance, renovation, and demolition. Further aspects are safety and wellbeing as well as the economic viability.

The term of sustainable construction often used synonymously for green buildings.

Environmental Product Declaration (EPD)

EPDs are 3rd party verified sustainability report cards for products and materials providing life cycle information on environmental impact categories.

Main environmental impact categories are global warming, ozone depletion, acidification, eutrophication, water consumption, and fossil energy consumption.

The EPD scope covers the life cycle either from 'cradle to gate' (most common in the construction material sector) or from 'cradle to grave'.

EPDs are produced in adherence to the global standards ISO 14040 and ISO 14025. Construction material EPDs mostly adhere to EN 15804.

Global Alliance for Buildings and Construction (GABC)

A global initiative launched at COP21 in Paris aiming at putting the buildings and construction sector on the below 2°C path.

LafargeHolcim is a founder member of the GABC and active in several GABC Work Areas.

Green Building Council (GBC)

A national non-profit, non-government organization with the objective to promote a transformation of the built environment towards buildings and cities that are environmentally sensitive, economically viable, socially just and culturally significant.

The World Green Building Council (WorldGBC) is the global network of national GBCs.

Green Building Label

A rating scheme which assesses a construction's performance against environmental, social and economic criteria. Typically, the holistic performance is aggregated in rating like 'Gold', 'Silver', 'Bronze'.

Leading Green Building Labels are LEED (USA, CAN), Green Star (AUS, NZL, ZAF), BREEAM (GBR, Europe), IGBC (India), EDGE (World Bank/Emerging markets).

Green Building Labels cover the whole life cycle: Design, construction, operation, maintenance, renovation, and demolition.

They are issued for specific construction types like office buildings, residential, schools, healthcare, or neighborhoods.

Responsible Sourcing System for Concrete (also known as Concrete Sustainability Council)

A certification system for responsibly produced and sourced concrete that was developed by the sector to promote and demonstrate concrete as a sustainable building material and to enable informed decisions in construction.

The CSC system covers the full supply chain, especially concrete, cement and aggregates.

The 3rd party audited CSC certificate is being issued in 'Gold', 'Silver' and 'Bronze' for a concrete plant or portfolio of plants.

The CSC system is recognized by BREEAM and aims to get recognition from other leading green building labels, first of all LEED and DGNB.

HEALTH AND SAFETY**Lost Time Injury (LTI)**

A work-related injury, after which the affected person cannot work for at least one full shift or full working day any time after the shift or day on which the incident causing the work-related injury occurred, regardless of whether such person is scheduled to work.

Lost Time Injury Frequency Rate (LTIFR)

The number of lost time injuries (LTI) per million hours worked.

Occupational illness

A condition or disorder not resulting from an injury, but caused by exposure to environmental factors associated with a person's job or employment.

Occupational Illness Frequency Rate (OIFR)

The number of Occupational Illnesses (OI) per million hours worked.

Occupational Injury

Injury resulting from a work-related accident/incident or from a single exposure occurring within, and attributable to the work environment.

Total Injury Frequency Rate (TIFR)

The number of injuries per million hours worked. It includes any injuries causing death, lost time, modified work duty and injuries resulting in medical treatment. TIFR doesn't include first aid.

SOCIAL AND STAKEHOLDER**Employee turnover**

The number of employees leaving the organization in the reporting period as a percentage of employees at year end.

CSR Spend

Social investments which are based on long-term strategies, implemented in collaboration with specialized local or international partners, and address clear needs in the communities where we operate. Areas of focus include health, education, shelter and infrastructure, environment and local employment creation.

Direct beneficiaries

Those who benefit directly from a social investment project's objective and directly participate in a project. All those employed by a project, or those who will use its output can be categorized as direct beneficiaries.

Indirect beneficiaries

A person, group of persons or organization which has no direct contact with a social investment project, but which benefit as a result of improvements made to the direct beneficiaries.

Human Rights Impact Assessment (HRIA)

A HRIA is conducted with a risk mapping workshop for the full local Exco team. This is followed by consultations at sites with a broad range of stakeholders, including employees, contractors, trades unions, community members, local authorities, and NGOs.

The prioritized recommendations are presented to the country CEO and a detailed local action plan is developed.

Human Rights Self-Assessment (HRSA)

An internal process undertaken by a Group company to identify social risks and opportunities. These risks are prioritized and action plans developed and monitored to address any issues arising.

Stakeholder Engagement Plan (SEP)

A SEP is a structured plan typically developed in collaboration with local stakeholders, which include representatives from local government, associations, schools, and local NGOs. It aims to

build and maintain constructive relationships at operational sites.

These stakeholders normally also participate in our Community Advisory Panels (CAPs), local platforms for dialogue provided by LafargeHolcim where community representatives discuss project ideas, address conflicts, or voice concerns.

ABBREVIATIONS AND ACRONYMS

AFR	Alternative fuels and raw materials	LTI	Lost Time Injury
BIRS	Biodiversity Indicators and Reporting System	LTIFR	Lost Time Injury Frequency Rate
CAP	Community Advisory Panel	MJ	Megajoule
CDP	Carbon Disclosure Project	NGO	Non-Governmental Organization
CDW	Construction and Demolition Waste	NOx	Nitrogen oxides
CHF	Swiss Francs	OI	Occupational Illness
CO₂	Carbon dioxide	OIFR	Occupational Illness Frequency Rate
CoBC	Code of Business Conduct	SEP	Stakeholder Engagement Plan
CSC	Concrete Sustainability Council	SO₂	Sulfur dioxide
CSI	Cement Sustainability Initiative	SPI	Sustainable Procurement Initiative
CSR	Corporate Social Responsibility	SSI	Strategic Social Investment
EPD	Environmental Product Declaration	TEQ	Toxic equivalency of dioxins and furans
EMR	Emissions Monitoring and Reporting	TIFR	Total Injury Frequency Rate
EMS	Environmental Management System	TSR	Thermal Substitution Rate
Exco	Executive Committee	UNGC	United Nations Global Compact
GABC	Global Alliance for Buildings and Construction	VOC	Volatile Organic Compounds
GBC	Green Building Council	WBCSD	World Business Council for Sustainable Development
GJ	Gigajoule	WPIM	Water Positive Impact Methodology
GRI	Global Reporting Initiative		
HRIA	Human Rights Impact Assessment		
HRSA	Human Rights Self Assessment		
GWh	Gigawatt hour		
HSSC	Health Safety and Sustainability Committee		
IB	Inclusive business		
IP&L	Integrated Profit and Loss Statement		
LCA	Life Cycle Assessment		
MIC	Mineral Components		
kWh	Kilowatt hour		

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