

# **GLOSSARY**

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### Accident Rate

Is the number of accidents with loss of time plus fatal accidents multiplied by 100 and divided by the number of workers (Corporate Guideline for definitions, criteria and statistical indicators of work accidents).

### Anodic Slime

Concentrate containing precious metals, generated during electrolyte refining to produce copper cathodes.

### Biodiversity

Biodiversity or biological diversity: variability among living organisms that form part of all land and aquatic ecosystems. Includes diversity within the same species, among species and between ecosystems (Title I, article 2, General Environmental Law).

- 2 | > **Biodiversity-rich habitat:** habitats forming part of Chile's protected wilderness system; habitats identified as having priority for biodiversity conservation; or which divisions formally recognize as significant based on a scientific study. Using this concept, Codelco identifies habitats recognized as having these characteristics by environmental assessments.
- > **Protected area:** any part of territory, geographically defined and established through an act of a public authority, placed under official protection to ensure biological diversity, secure the preservation of nature and conserve environmental heritage.
- > **Endangered species:** any species for which a reduced number of specimens remains in nature and whose survival is seriously threatened if causal factors remain unchanged.
- > **Vulnerable species:** species approaching an endangered category in the near future, if causes for their decline remain unchanged.

### Blister copper

Metallic material with a purity level of around 99.5% of copper; used as raw material for producing high quality

products, such as fire-refined copper ingots and mainly copper cathodes.

### Carbon Footprint

The accounting of greenhouse gas emissions, measured in CO<sub>2</sub> equivalent, in the generation of products and services.

### CO<sub>2</sub> Equivalent Ton

Besides carbon dioxide, other gases also contribute to the greenhouse effect, the main ones being methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). To express the levels of these gases in the same unit of measure, CO<sub>2</sub> equivalent tons, well known and streamlined conversion factors are applied, based on the estimation of how many tons of each of these would be required to reach the same effect as one ton of carbon dioxide.

### Code of Conduct

A formal declaration of the ethical principles of a company and of the norms governing its actions to stakeholders, which must be applied to all company operations.

### Concentrate

The first commercial product emerging from the copper production line, consisting of roughly equal parts copper, iron and sulphur.

### Days lost due to work accidents

These are days lost due to accidents caused by or at work subject to payment of a subsidy, whether it be paid or not in the accounted month, including those carried forward. (Corporate Guideline of definitions, criteria and statistical indicators of work accidents).

### EBITDA

Earnings Before Interest, Taxes, Depreciation, and Amortization.

### Electrorefining

Process for the production of copper cathodes, carried out in electrolyte cells, which alternate a copperblister anode and an initial cathode of pure copper in a sulphuric acid solution. Continuous, low-intensity electric current is applied to dissolve copper from the anode and deposit it on the initial cathode, to produce cathodes that are at least 99.97% pure.

### Energy

- > **Direct energy:** energy entering the operational limits of an organization. It can be consumed within the organization or exported for other uses. Direct energy can appear as a primary form (for example, natural gas for heating) or as an intermediate form (for example, electricity for lighting).
- > **Indirect Energy:** Energy produced outside the operational limits of an organization, which is consumed to supplement the organization's intermediate energy demands (for example, electricity for heating or refrigeration). The most common example is fuel used outside the operational limits of an organization to generate the electricity used within the limits of the same.
- > **Greenhouse Gases (GHG):** GHG are the six gases listed in the Kyoto Protocol: Carbon Dioxide (CO<sub>2</sub>); methane (CH<sub>4</sub>); nitrous oxide (N<sub>2</sub>O); water vapor (H<sub>2</sub>O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF<sub>6</sub>).
- > **Renewable Energies:** Renewable energies derive from natural processes that are constantly reloading. They include electricity and heat generated through the sun, wind, oceans, hydroelectric plants, geothermal resources, biofuels and hydrogen obtained with renewable resources.
- > **Energy Saving:** A reduction in the amount of energy used to perform the same tasks or processes. This term does not include reductions in energy consumption resulting from the reduction of activities within the organization (for example, outsourcing of production).
- > **Management of Maximum Demand:** Management of the Corporation's hourly power consumption, in order to optimize the use of energy-consuming assets and decrease the economic charge attributable to this concept.

**FMT**

Fine Metric Tons.

**Global Frequency Rate (TFG)**

Is the number of own workers and contractors injured in accidents with loss of time, plus the workers diseased, multiplied by every million hours worked by the personnel in the month under consideration. (Corporate Guideline for definitions, criteria and statistical indicators of work accidents).

**Global Severity rate (TGG)**

It is the severity rate including own workers and contractors employees.

**Impending Zone**

That where the measurement of air, soil or water pollutants, result in 80 to 100% of the value of the respective environmental quality regulation. (Title I, article 2°, General Environmental Law).

**Incident with Environmental Consequences**

A undesired event that has a negative impact on the air, water, soil, plants and animals, and/or on inhabited areas. These include: spills, emissions into the air, fires or other events caused by natural phenomena.

**Isokinetic Sampling**

A sampling method used on particulate material in the air. The sampling apparatus has the same collection efficiency for any size air particulate, independent of the velocity and direction of gas entering the instrument.

**Joint venture**

The association of two or more private or public companies, to invest risk capital.

**Law 13,196**

Law that applies a 10% tax on foreign currency returns from the sale of Codelco's copper and byproducts abroad.

**Leaching**

Production process stage that allows the separation of copper from other minerals. It consists in the treatment of oxide mineral through a concentration process that uses a sulphuric acid solution. This process benefits from the property of oxide mineral of being easily attacked by acids.

**Life Cycle**

Evolution of a product from the beginning to the end of its life cycle. In this case it corresponds to the copper production process evolution analysis, from mineral extraction up to the end of its useful life and final disposal.

**Massive Mineral Waste**

Waste generated in large volumes by the mining activity. In general, due to its composition and disposal, it is subject to special regulations.

- › **Waste rock:** waste with no economically relevant content, extracted to gain access to rock with higher ore grades. In open pit mining this adds up to very large volumes, but it is practically nonexistent in underground mining.
- › **Low grade ore:** rock with an ore grade so low it is not worth concentrating, which is accumulated in special dumps until business conditions determine a change.
- › **Leaching wastes:** ore treated using acid leaching of some kind and disposed of, once it is exhausted.
- › **Slag:** the glassy waste left from copper smelting, which is a complex mixture of elements eliminated from the copper conversion process. Occasionally it can be sold or recycled.
- › **Tailings:** Mineral waste suspended in water eliminated from concentration plants, generally deposited in a tailings dam. Typically it contains 50% solid material, composed of minerals that are not very soluble.

**Molybdenum**

A metal whose high fusion point renders it an important consumable for the manufacturing of special steel alloys. It does not exist in a pure state in nature, but is frequently associated to copper.

**Number of days lost by work accidents**

Number of days a worker, regardless of whether that status is retained, is temporarily incapacitated to work due to a work accident subject to payment of a

subsidy, regardless of whether it is paid or not.

**Petajoule**

1,015 joules. A joule is defined as the amount of energy required to exercise a force of one newton along a distance of one meter.

**Power Factor**

Relationship between active and reactive energy consumption in an electric system.

**Preventative Handicap Medical Committee (COMPIN)**

An organization that reports to the Regional Ministerial Health Secretariats, with competence to declare and appraise disability and authorize medical leaves due to work accidents and professional diseases.

**Professional Illness**

That which is directly caused by the exercise of a job or profession, that is, whose development resulted from a chronic or sustained exposure to agents, factors, or specific conditions that are inherent to the risk of contracting the disease. (Corporate Guideline on definitions, criteria and statistical indicators of work accidents).

**RAF ingots**

Fire-refined product from concentrate, which is smelted and refined using a series of furnaces, to produce high quality ingots containing at least 99.9% copper.

**Raw Material**

Inputs that an industry or plant requires for its labors, which may come from other industrial operations. This refers to raw materials recycled after consumption or after industrial production. In the case of Codelco, raw materials are defined as minerals the company processes that contain elements that give value to its business.

**Recovered Materials**

Materials used in the production process that substitute virgin materials and that are obtained from external sources. They are not byproducts, waste or other produced by the organization. They include material recycled after consumption and industrial waste

(for example, new scrap from manufacturers and waste equipment at the end of its useful life), and excludes the organization's internal recycling (virgin waste).

#### Saturated Zone

The zone where one or more environmental quality norms are surpassed in (Title I, article 2°, General Environmental Law).

#### Severity rate (TG)

Is the number of days lost by injured workers and days of charge, per every million hours worked by all the personnel in the month under consideration (Corporate Guideline for definitions, criteria and statistical indicators of work accidents).

#### Smelting

Process that separates other minerals and impurities from copper concentrates. The copper concentrate is heated in furnaces, where two materials are obtained: slag, and matte, containing 45% to 48% copper. Converter furnaces further separate this material into sulphur and iron, to obtain a metal that is 70% to 75% copper. In the next step, copper blister, which is 96% copper, is produced. This copper then undergoes a series of processes, such as fire refining, to produce anode copper, containing 96.6% to 96.7% copper.

#### Spills

Dumping of a substance outside of its established form of confinement.

#### Surplus

Results for the Corporation before income tax, extraordinary items, minority interest and before Law 13,196 is applied.

#### Tailings Dam

An engineering work consisting of a wall or dike to contain tailings from the concentration plant. There, the solid part of the tailings (about 50% by weight) decants, while the watery part forms an artificial lagoon, part of which is released into the environment, becoming in that moment wastewater.

#### UTM

Monthly Tax Unit, as of December 31st, 2010, worth \$37,605.

#### Value Statement

A high level document in Company hierarchy, elaborated in 2010, it governs the actions of workers and guides company management activities into the future. It contains the company's core values.

#### Verification

The revision by independent third parties of the processes and systems of an organization for the purpose of ensuring compliance with certain standards or regulations.

#### Waste

Any substance, object, or material that the holder intends to dispose of, or is disposing. (National Hazardous Waste Management Regulation, S.D. 148/2003).

- **Disposal:** final stage in solid waste management, through their definitive disposal in a system that assures that their interaction with the environment will not have any relevant associated risk.
- **Incineration:** destruction through combustion or a technically controlled burn of organic contents contained in waste (National Hazardous Waste Management Regulation)..
- **Wastewater:** waste water or effluent discharged from a source into a body of water.
- **Hazardous:** waste containing some substance(s) that due to their composition, presentation or possible mixtures or combinations, may pose a hazard in the present or future, directly or indirectly to human health and the environment.
- **Recycling:** reprocessing a material already used, to transform it into something similar or something different, for use as raw material.
- **Reuse:** techniques to re-use a material or product used, without changing its nature.
- **Solids:** any waste that is being handled or is going to be handled as a solid compound, whether it is in a solid, liquid, gaseous state or a combination of these states.

#### Water

- **Reserve:** net flow of water stored, extracted from sources or recycled from processes or activities, minus water removed from the reserve for use.
- **Extracted:** water extracted from surface or underground sources, for processes, activities and for its storage or reserve.
- **Reuse/recycling:** water that is reused or re-enters the process cycle, plants or facilities of an organization. Its percentage is calculated by dividing the amount of recirculated water by the total amount of water used, including extraction, reserve and recirculation.

#### Work Accident

Any injury suffered by a person due to or at work that produces disability or death. Accidents are classified into:

- **Accidents with Loss of Time (CTP)** Are accidents due to or at work, where the worker takes a medical leave of one or more days, due to having suffered a temporary disability (type 5 medical leave or rest order.)
- **Accidents without Loss of Time (STP)** Are accidents caused by or at work, in which the worker suffers minor injuries that allow him/her to continue working without the need for rest.
- **Fatal Accidents** The worker dies due to a work accident or while at work.

#### Work accident frequency rate (TF)

Is the number of accidents with loss of time, plus the amount of workers diseased, per every million hours worked by all the personnel in the month under consideration (Corporate Guideline for definitions, criteria and statistical indicators of work accidents).

### Additional Information on the Internet

- National Copper Corporation of Chile, Codelco.  
[www.codelco.com](http://www.codelco.com)
- Union of Copper Workers, FTC.  
[www.ftc.cl](http://www.ftc.cl)
- Union of Copper Supervisors, ANSCO.  
[www.ansco.cl](http://www.ansco.cl)
- Asociación Gremial de Supervisores del Cobre, ANSCO.  
[www.ansco.cl](http://www.ansco.cl)
- Global Reporting Initiative, GRI.  
[www.globalreporting.org](http://www.globalreporting.org)
- International Copper Association.  
[www.copperinfo.com](http://www.copperinfo.com)
- International Molybdenum Association, IMOA.  
[www.imoa.org.uk](http://www.imoa.org.uk)
- World Economic Forum, WEF.  
[www.weforum.org](http://www.weforum.org)
- Mining Council of Chile A.G.  
[www.consejominero.cl](http://www.consejominero.cl)
- ISO-14001 Environmental Management System – International Organization for Standardization.  
[www.iso.org](http://www.iso.org)
- Antimicrobial Copper Brand.  
[www.antimicrobialcopper.com](http://www.antimicrobialcopper.com)
- Codelco Educa.  
[www.codelcoeduca.cl](http://www.codelcoeduca.cl)

