

Glossary

Alloy A substance with metallic properties, composed of two or more chemical elements of which at least one is a metal. More specifically, aluminum plus one or more other elements, produced to have certain specific, desirable characteristics.

Alumina Aluminum oxide produced from bauxite by an intricate chemical process. It is a white powdery material that looks like granulated sugar. Alumina is an intermediate step in the production of aluminum from bauxite and is also a valuable chemical on its own.

Aluminum foil A flat-rolled product, rectangular in cross section, of thickness from 0.006" to 0.00025".

Aluminum plate A flat-rolled product, rectangular in cross section, of thickness not less than 0.250" and with sheared or sawed edges.

Aluminum sheet A rolled product, flat or coiled, rectangular in cross section, with thickness less than 0.250" but not less than 0.006" and with slit, sheared or sawed edges.

Aluminum SpaceFrame™ An integrated structure of aluminum castings and extruded parts that forms the primary body frame of a new generation of automobiles.

Anodizing An electrochemical process for applying a protective or decorative coating to metal surfaces.

Bauxite An ore from which alumina is extracted and from which aluminum is eventually smelted. Bauxite usually contains at least 45% alumina. About four pounds of bauxite are required to produce one pound of aluminum.

Casting The process of forming molten metal into a particular shape by pouring it into a mold and letting it harden.

Consumer The final purchaser and user of a finished product.

Continuous casting A means of casting aluminum in which an ingot, billet, tube or other shape is continuously solidified and withdrawn while the molten metal is being poured, so that its length is not determined by mold dimensions.

Customer Any person or organization that purchases a product or service from Alcoa.

Dow Jones Industrial Average (DJIA) The most widely followed index of stock market activity, which indicates daily market trends by calculating the average performance of stocks of 30 leading companies in major industries. Alcoa has been a DJIA company since 1959.

Engineered product A basic aluminum fabricated product that has been mechanically altered to create special properties for specific purposes; forgings and extrusions are examples of engineered products.

Extrusion The process of shaping material by forcing it to flow through a shaped opening in a die.

Fabricate To work a material into a finished state by machining, forming or joining.

Flat-rolled products Aluminum plate, sheet or foil products made by passing ingot through pairs of rolls. By moving the rolls closer together and passing the ingot between them, the thickness is reduced and the length is increased.

Forging A metal part worked to predetermined shape by one or more processes such as hammering, pressing or rolling.

Hydrate An aluminum oxide with three molecules of chemically combined water.

Ingot A cast form suitable for remelting or fabricating. An ingot may take many forms: some may be 30 feet long and weigh 15 tons; others are notched or specially shaped for stacking and handling.

London Metal Exchange (LME) The international trading body that facilitates the worldwide open market buying and selling of metals.

Magnesium A light, silvery, moderately hard metallic element used in processing metals and chemicals, and in alloying aluminum to give it desired metallurgical properties.

Metric ton (mt) A unit of mass and weight equal to 1,000 kilograms, or 2,204.6 pounds.

Micromill Alcoa Micromill technology uses fully continuous casting and rolling processes to produce aluminum sheet with reduced capital investment, lower operating costs, and—for some products—superior metallurgical properties.

Mill products Metal that has been fabricated into an intermediate form before being made into a finished product. The most common fabricating processes for aluminum are rolling, extruding, forging and casting. Example: aluminum sheet, a mill product, is used to make beverage cans, a finished product.

Pot In aluminum production: the electrolytic reduction cell, commonly called a "pot," in which alumina dissolved in molten cryolite is reduced to metallic aluminum. A series of cells connected electrically is called a potline.

Smelt To fuse or melt ore in order to extract or refine the metal it contains.

Spent pot linings (SPL) Composite of carbon, refractory and insulation materials, fluorides and trace amounts of cyanide remaining after the lining of an aluminum smelting pot is no longer usable. Alcoa's Portland Aluminium has developed a process to capture the fluorides in SPLs for reuse in smelting and convert the other components to an environmentally harmless "sand" for roadbeds or other construction applications.