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***ZINC***

***Zinc exists naturally in rocks and soil, and small amounts are also found in air, water, plants, and animals. Zinc minerals have been mined for a very long time, zinc alloys have also been used for centuries. Pure zinc is a bluish white solid metal. Andreas Marggraf 1702-1782 is generally credited with identifying zinc as an element in 1746. Earth’s crust has about two billion tons of zinc ore available for mining. The leading producer of zinc metal is China, Australia, Peru, and Canada. In the U.S. Alaska produces the largest amount of zinc, but is also mined in Tennessee and Missouri. Zinc sulfide is most common, 95% of zinc mined around the world is found as zinc sulfide. To get pure zinc the sulfur has to be removed and it is heated to 1,650 F. Zinc’s atoms have 30 protons and also has a 4 electron shells which means it is in period 4, zinc is in group 12 because it is a transition metal. Zinc is a lustrous, shiny, and metallic element. It conducts electricity well, and combines well with other metals. Zinc is also soft, ductile, and malleable. The atomic weight of zinc is 65.41 atomic mass units, its melting point is 787.15 F and the boiling point is 1,664.6 F. It is used in fireworks because it burns at high temperatures making bright sparks. Pennies are made of zinc not copper. The inside of a penny is zinc and only the outside of the penny is copper. Zinc oxide is probably the best known and the most used compound of zinc. It is a material that has gone through substantial changes in the way that is perceived, both by specialists and by the general public. It is used as a coating to protect iron, steel, brass, zinc alloy casting, sheet for building applications, and a range of chemical applications. A large proportion of all zinc, more than a third, is used to galvanize metals such as iron to prevent corrosion. Zinc is used for dry batteries, roof cladding and to protect iron structures from corrosion by attaching zinc as sacrificial anodes, zinc is also used in light weight coins.***