

LOOK AROUND ... EVERYTHING IS MADE FROM SOMETHING.

1 INSULATION, ROOFING, SIDING AND HARDWARE

- 810 pounds of insulation, covering 3,184 square feet, usually made of glass wool (silica, feldspar and trona) or vermiculite (mica containing magnesium, aluminum, iron, silica, manganese, phosphorus and sulfur).
- 2,955 square feet of roofing shingles, usually made of wood or asphalt - composed of silica sands, limestone and petroleum.
- 314 pounds of nails and screws (iron and zinc) are used to fasten the different pieces of lumber together.
- The 18 interior doors and 4 exterior doors will each have door knobs, locks and hinges made of steel or brass (copper and zinc).

2 WINDOWS, PLUMBING AND ELECTRICAL

- 279 pounds of glass for 18 windows and one sliding glass door.
- Glass is made of trona, silica sand, limestone and feldspar.
- 521 pounds of copper, used for 291 feet of plumbing pipes and 780 feet of electrical wiring. Pipes can also be made of steel, plastics and clays.
- 14,787 pounds of gypsum to make 5,772 square feet of interior wallboard.
- 3,131 square feet of exterior siding, weighing 381 pounds if it's aluminum siding.

3 KITCHENS AND APPLIANCES

- 1,050 pounds of appliances made of steel and stainless steel containing iron, chromium, molybdenum, aluminum, zinc, copper, lead and numerous other metals.
- Garbage disposal which contains an electric motor (copper and steel), stainless steel, and various plastics and rubber gaskets reinforced with industrial minerals.
- Kitchen sink, usually made of stainless steel or steel coated with porcelain (clay), and faucets (a variety of different alloy steels, copper, zinc and iron).
- Kitchen utensils, dishes and silverware, made from various metals and clays.

4 FOUNDATION, WALLS AND UNDERGROUND UTILITIES

- 125,349 pounds of concrete, made by mixing water with sand, gravel, and cement. Cement is made of limestone, bauxite, clay, shale and gypsum. Concrete is reinforced with steel rods (rebar).
- 15,912 pounds of concrete block.
- 22,298 pounds of brick made from mixing various kinds of sand with different types of clay.
- 56,160 pounds of gravel and stone for decoration and drainage.
- Underground utility lines provide water, sewer, electricity, gas, telephone and cable services.



5 BATHROOMS

- 218 pounds of ceramic (clay, feldspar and limestone) sinks, toilets and tile used to cover walls and floors, plus the bathtubs and/or shower stalls.
- 100 plumbing fittings to hook the pipe together (copper or iron and different steel alloys).
- 177 feet of plastic or metal pipe to carry the waste water away to the sewer, plus the 70 fittings to hook it together.
- 235 linear feet of galvanized (zinc) heating or air conditioning ducts to carry the heated or cooled air throughout the house.

6 HOME ENTERTAINMENT

All electronics equipment, such as televisions, telephones, computers, video game consoles, internet modems and smart electronics, contains no less than 30 different metals and minerals, including aluminum, antimony, barite, beryllium, cobalt, columbium, copper, gallium, germanium, gold, indium, iron, lanthanides, lithium, manganese, mercury, mica, molybdenum, nickel, platinum, quartz crystals, rhenium, selenium, silicon, silver, strontium, tantalum, tellurium, tin, tungsten, vanadium, yttrium, zinc and zirconium.

7 AUTOMOBILE

	Conventional Car	Electric Car
Copper	22.3 kg	53.2 kg
Lithium	0	8.9 kg
Nickel	0	39.9 kg
Manganese	11.2 kg	24.5 kg
Cobalt	0	13.3 kg
Graphite	0	66.3 kg
Zinc	.1 kg	.1 kg
Rare earths	0	.5 kg
Other	.3 kg	.31 kg

(steel and aluminum not included)

- The above statistics from iea.org demonstrate that electric cars require more of these mined minerals than conventional cars. There is also an increased demand on a number of mined minerals for the generation of solar and wind energy.
- Amount of steel in a car: 1985 pounds
- Amount of aluminum in a car: about 477 pounds
- More than 135 billion gallons of petroleum-based fuel are used to power automobiles in the U.S. each year.
- There are 290 million passenger vehicles in the U.S.

8 STREETS AND ROADS

- 5-inch-thick paving, made from 94 percent aggregate and 6 percent oil or asphalt concentrate, is used to cover the surface of roadways.
- 8 inches of 3/4 inch aggregate and fines (finely ground rock) are used for a basecourse (base layer) underneath the paving.
- Existing soil under the basecourse is compacted to a depth of 8 to 12 inches.
- There are four million miles of roads in the U.S.

The size of the average new house is 2,500 square feet and contains three or more bedrooms, two and one-half or more bathrooms, a two- or three-car garage, central air conditioning, a fireplace, and costs about \$350,000.

The cost of materials and labor to assemble that house is about 60% of the selling price. The cost of the lot, and serving that lot with all the different utilities, can cost more than \$87,000. More than a million new single-family houses are built every year in the U.S.

Forest Products

More than 16,000 board feet of lumber and 6,000 square feet of structural panels (such as plywood) are used to build the average house. Wood is used to provide the roofing, flooring, and interior and exterior walls, as well as a large part of the insulation and interior and exterior finishing.

Minerals and Metals

More than a quarter million pounds of minerals and metals were mined to provide the foundation and walls to support the house, the fasteners (screws and nails) to hold everything together, the electrical wiring, the plumbing pipes and fixtures, and the variety of materials to make it liveable.

Petroleum Products

Petroleum products are used to make carpet and some parts of laminate flooring, plastic for water and sewer pipes and other uses. Some paint used inside and out, and some of the insulation to conserve energy and to protect electrical wiring, are petrochemical products that are filled with various industrial minerals.