GYPSUM:

From Space to Wine to Walls

A plentiful substance formed on earth over 200 million years ago is now being manufactured into specialized formulations for everything from wine-making to patterns for space shuttles and building homes and commercial structures.

It’s called gypsum, and chances are you touch it in some form every day.

One of its latest uses is in connection with the $2.9 billion contract to build two space shuttles, one already built and being tested by Rockwell International’s space division at Downey, California, and the other due by 1980. Parts for the vehicle’s critical Environmental Control Life Support System are fashioned with patterns made of highly stable Densite gypsum plaster. The system provides air condition and circulation throughout the major sections of the orbiter.

In contrast, man started using the lime-like rock 6,000 years ago. The Assyrians called it “alabaster” and used it for sculpture. In 1700 B.C. the Egyptians used it to seal Cheops in his pyramid tomb and the Greeks gave it its name, “gypsos.”

Romans used it like today’s builders to plaster their homes for fire protection, and Michelangelo coated the ceiling of the Basilica with it as a smooth surface for his priceless painting.

In the 1800’s great reserves of gypsum rock were discovered in the United States and Canada and, since then, man’s uses of it have burgeoned. This unusual story is based on an interview with a gypsum expert at Georgia-Pacific Corp. which owns large reserves of the rock and manufactures it into products for these little-known markets as well as better-known uses in construction.

Today NASA, the Army, Navy, and Air Force use it to fill practice warheads for missiles, rockets and bombs because it has the same specific gravity as lethal explosives and saves taxpayer money, says Georgia Pacific.

Gypsum also is used to fashion the full-scale models of new Detroit automobiles, and aircraft such as the 747, DC 10 and the new F-111. Because it has an exothermic reaction and expansion tendency, it’s used to anchor casings for offshore drilling platforms. It also hardens water for breweries, controls the tartness and clarity of wine, helps make toilet bowls, anchors tombstones, clears murky farm pond waters, combines with straw and manure to grow mushrooms, makes dental castings for false teeth, goes into bakery yeast, chalk, plate glass, instant heliports, peanut fertilizer, casting molds for machine parts, ‘toys, dolls, false brick panels for walls, table lamps, plastic furniture molds, china dinnerware, reproductions of famous statuary, dietary supplements and as an anti-diarrheal in chicken feed to induce egg laying.

And, oh yes, add gypsum wallboard and plaster for housing, among still other things.