

CHEMISTRY

Plastic and Sand Beat Heat Better Than Steel

► A PLASTIC reinforced with "fibers of sand" that can withstand high blowtorch and rocket engine temperatures much better than hard steel plate may become the newest of the urgently sought materials for rocket nose cones, exhaust nozzles and guidance fins.

In a recent test, the new reinforced plastic, called Astrolite, was only scorched and marred after 142 seconds exposure to an oxyacetylene blowtorch flame at 4,500 degrees Fahrenheit. The same flame cut completely through a half-inch slab of steel in just 42 seconds, the developers, H. I. Thompson Fiber Glass Co., Los Angeles, reported.

The new plastic is expected to have applications at temperatures up to 10,000 degrees Fahrenheit.

Most of Astrolite's potential uses are in the missile field. C. S. Brown, assistant executive field engineer, said the plastic should prove satisfactory for missile nose cones subjected to extremely high temperatures upon re-entering the earth's atmosphere.

Astrolite is composed of a phenolic resin binder (plastic) holding together pure silica fibers. Silica, silicon dioxide, in varying degrees of purity is sand. It is produced in a fibrous form in much the same manner as the mineral asbestos is produced as fibers.

The developers said Astrolite has proved superior to asbestos-phenolic and fiber glass-phenolic materials.

Science News Letter, April 5, 1958

MEDICINE

Substance Aids Body's Use of Vitamins, Iron

► A SWEET-TASTING substance found in red seaweed, quince, the bosc pear and mountain ash berry has been found to increase body absorption of vitamin B-12 and iron.

The sweet-tasting agent is D-sorbitol, a carbohydrate that was isolated from fruits in the early 1870's but remained a laboratory curiosity for almost 60 years.

The significance of the D-sorbitol lies in its ability to bypass the "absorption barrier" in the gastrointestinal tract, allowing more vitamin B-12 and iron into the blood stream, the Smith, Kline and French Laboratories, Philadelphia, has reported.

This can mean increased nutrition for the aged, increased iron supplies for the pregnant, and rapid tissue growth for the convalescent and adolescent.

The discovery is medically important because in many cases of nutritional deficiency, such as lack of vitamin B-12, the fault lies in poor absorption, not lack of nutrients.

The "absorption barrier" is the inability of the gastrointestinal tract to absorb B-12 unless certain gastric substances are present. D-sorbitol does away with the necessity of adding any gastric substance to aid absorption of B-12.

Science News Letter, April 5, 1958



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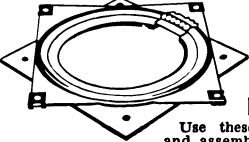
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