

# BETTER BALLAST CLAY

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*An article published in the July 2014 issue of the FAC  
News, Rich Weber, Editor*

The modeling clay commonly used for ballast by modelers is oil-based. Oil-based clays are referred to by a number of genericized trademarks. They have been around for quite a while. Plastilin, was patented in Germany by Franz Kolb in 1880. Plasteline was developed by Claude Chavant in 1892. Plasticine was invented in 1897 by William Harbutt of Bathampton, England. Plastilina is trademarked as Rorna Plastilina by Sculpture House, Inc. And Crayo!® Modeling Clay is widely available today

Oil-based clays are made from various combinations of oils, waxes, and clay minerals. Although the exact composition is a secret, Plasticine is composed of calcium salts (principally calcium carbonate), petroleum jelly, and long-chain aliphatic acids (principally stearic acid). Because the oils do not evaporate as does water, oil-based clays remain malleable even when left for long periods in dry environments. Articles made from oil based clays cannot be fired, and therefore are not ceramics. Oil-based clay melts when exposed to heat, and is flammable at much higher temperatures. Because the viscosity of oils decreases as temperature rises, the malleability is influenced by heating or cooling the clay.

There are some problems with oil- based clay however. It smears on a hot day and won't adhere very well on cold days. It's greasy and the oil may seep out into the paper and balsa it's adhered to. The dyes commonly present also can stain structure. Eventually it can harden a bit due to migration or out gassing of the oils.

There is an modern alternative; Duct Seal Compound, aka "Monkey Shit". This compound seals conduit openings against drafts, dust moisture and noise. It also protects terminal boxes, pot heads and bushings from corrosive elements and deadens switch gear panel noise. The dough-like compound is easily "thumbbed" over holes and gaps. It will not harden or form a skin under normal conditons . It has much better temperature properties than clay. It adheres at -20°F ( -29°C) and will not slump after 1 hr. at 350°F (175°C). It is at least as dense as modeling clay. I recall we used it to seal vacuum chamber leaks. It has much lower out gassing properties than oil-based clays and does not get greasy on hot days. It comes in one pound bricks for under \$5. Your local hardware store will probably have it and know it as "Monkey Shit". If not. ask for Gardner Bender Duct Seal Compound - DS 130 T r y i t , you'll like it.

This is not "Plumbers Putty" which goes hard all too soon.