## FIRE RESISTANT INSULATION for High Temperatures 2000 Nova Award Nomination 10

FireComp is a fire resistant and high temperature insulating composition that can sprayed, trowelled, or hand formed onto articles made of wood, metal, concrete, plastic, fabric, and other materials, The composition can be conveniently manipulated to form an article of virtually any shape or size. The resulting article dries to become rigid, yet remains relatively lightweight. When a material coated with FireComp is exposed to heat or flame, no noxious fumes or smoke are released and it is non-carcinogenic according to OSHA definition.

FireComp was invented in Jackson, Missouri in the fall of 1991 at the inventor's welding shop. He received a United States patent for his material in August of 1994, Australia in April of 1997, and Europe (France, England, and Germany) in February of 1998. The inventor decided to formulate his own fire resistant insulation for his building because most of the sprayed on insulations available did not meet his requirements. Necessity has always been the mother of invention.

What makes this fire resistant material innovative- is its' ability to take the punishment of an oxygen/acetylene torch temperature of 5500 – 6000 degrees. (See photo.) The inventor has spent considerable effort gathering as many products on the market as possible and putting them to the same test that FireComp endures. He has yet to find a product that does not melt, flame, or disintegrate at these temperatures. Another impressive and documented feature of FireComp is its' ability to insulate against a 2200 degree flame from a 2" propane fueled nozzle. The probe attached to the backside registered only a maximum 243 degrees after nearly twelve hours of punishment. (See Graph.)

FireComp has been used in three diverse applications at Lone Star Industries, Inc., a manufacturer of portland cement. A 1" thick floor of FireComp was poured above a kiln to divert the stifling heat and allow work crews to do their job. The pouring of this floor eliminated the need for an air cooling system that had been slated. Another project was the coating of 200 ft. of reverse air ducting. This ducting carried gaseous air that reached 400 degrees and because of frequent shut downs, an acidic dew was formed that corroded the ducting on the inside. After a coating of FireComp, the ducting temperature is held to 20 degrees above ambient thus eliminating the acidic dew. The third project is a room devoted to air compressors that was sprayed with FireComp not only because of its fire stop ability but primarily because of its ability to lower sound decibels. FireComp has also been sprayed on a warehouse enclosure and in the paint room of a body shop to help lower insurance costs for the owner. In order to further demonstrate the versatility of FireComp, the inventor fabricated a set of three exhaust pipe gaskets that were installed in a tugboat owned by a local barge line. The gaskets were removed after one year during a routine maintenance and none had failed.

The Boeing Company, manufacturer of space shuttles, airplanes, and missiles, is slated to perform tests on FireComp to determine its usefulness on various projects. The inventor has been communicating with engineers at Huntington Beach and Downey, California, and St. Louis, Missouri. FireComp is currently the back up material to their prime material with the possibility of replacing their prime material if the test results are favorable.

FireComp has the potential to be recognized as the premier fire stop in the industry. There are no products on the market that have FireComp's ability to insulate against high temperature flame without melting, flaming, disintegrating, and emitting harmful smoke and fumes. The applications for FireComp are endless and include firewalls in buildings of all types, protection for electrical conduit and structural Ibeams, and to protect valuable and sensitive parts adjacent to areas in need of the flame of a cutting torch or welding stinger.



**FireComp 12 Hour Test** 



Photo shows the inventor holding a 3/8" sample of FireComp in one hand and a 5500 – 6000 degree Fahrenheit oxygen/acetylene torch in the other hand.