

Protective Clothing

Protected by special suits, the firefighters pictured are undergoing training in fire entry—moving directly into flames—which is frequently required in combating fires involving highly flammable products. The fire entry suit, composed of eight separate layers of material, is made by Fyrepel Products, Inc., Newark, Ohio, which



manufactures a line of protective clothing for firefighting and for use in industrial jobs where workers are exposed to high heat and such other hazards as steam and hot liquids. Among the fabrics used in the Fyrepel line is one originally developed for astronauts' space suits.

For the Apollo program, Johnson Space Center was looking for a new space suit fabric which had to be thin, light and flexible, yet durable and fire-resistant in high-oxygen environments. At that time, Owens-Corning Fiberglas Corporation, Toledo, Ohio was experimenting with an ultrafine glass fiber yarn called Beta Fiber which seemed to meet the requirements. Johnson contracted with Owens-Corning for further development of Beta Fiber and for research on new fabric weaving and coating techniques. Owens-Corning wove the yarn into a fabric, coated it with Teflon® TFE—manufactured by DuPont Company, Wilmington, Delaware—and tailored it for astronaut wear. Now called Beta Glass®, the material is supplied to Fyrepel by Owens-Corning and incorporated into Fyrepel's Fyretex and Beta-Mex aluminized fabrics. These fabrics are used in the fire entry suits pictured, several other types of protective suits for wear in hot industrial environments, and such accessory items as heat-reflecting curtains for industrial applications.

[®] Teflon is a registered trademark of DuPont Company.

[®] Beta Glass is a registered trademark of Owens-Corning Fiberglas Corporation.

