



M. A. INDUSTRIES, INC.

Quality Products Through Creative Research

STEEL REINFORCEMENT

The M.A. Industries, Inc. manhole steps are steel reinforced with one-half inch (#4) deformed steel conforming to ASTM A-615 Grade 60. Deformed steel reinforcement yields a good mechanical bond with the polypropylene, enhancing the strengths of both materials. All M.A. manhole steps are reinforced with one-half inch rod except our PS3-PFC model which contains a five-eighth inch steel rod.

M.A. uses only 100% domestic steel with a minimum tension yield of 65,000 P.S.I. Vanadium and other elements in the ingredients are utilized to create a high strength steel that is ductile. This is necessary as high carbon steel tends to be brittle.

Prior to shipment the steel is stored indoors to prevent oxidation. In inclement weather the steel is protected during shipment. M.A. pays a premium for this steel and the handling of it. However, considering the fact that a manhole step directly supports a human life, the costs are necessary.