

# Industrial Applications

Aerospace



# Aerospace

## *Rockets and Missiles*

The vast field of rockets and missiles takes advantage of many of the properties of graphite. Applications include tactical rockets, strategic rockets and missiles, and large, advance-launch systems. Rapid temperature rise and unusually high operating temperatures are encountered and unusual cone, nozzle and vane shapes are needed. Graphite is one of the few materials that can reasonably meet the demands encountered under these conditions. Of particular importance in this type of application are the excellent thermal properties of graphite – high thermal shock resistance, high thermal stress resistance, and a strength increase with temperature increase. In addition, its excellent machinability makes it possible to maintain the required close tolerances. For most short-time applications, firing times are normally less than one minute, graphite is very cost effective in the hot, reactive atmosphere.

