

# Mitigation Techniques for Reduced Rocket Motor Vulnerability against External Thermal Stimuli

Benjamin T Smit  
Rheinmetall Denel Munition  
PO Box 187  
Somerset West Western Cape 7129  
South Africa  
Phone: +27218503139  
Fax: +27218502999  
E-mail: [ben.smit@rheinmetall-denelmunition.com](mailto:ben.smit@rheinmetall-denelmunition.com)

Solid propellant rocket motors used widely in conventional and state-of-the-art tactical missiles typically react violently when exposed to external thermal stimuli. Collateral damage caused as a result includes potential loss of life and compromised operational capability.

Different design options and mitigation techniques devised to reduce the cook-off vulnerability of tactical missile rocket motors are described and the effectiveness of these potential solutions against the wide spectrum of thermal stimuli is postulated with supporting examples.