

Development Of New Insensitive TNT Based Explosives With Excellent IM
Characteristics

Nikki Rasmussen
ATK Thiokol
P.O. Box 707
Brigham City UT 84302
Phone: 435 863 3586
Email: nikki.rasmussen@atk.com

Several desensitizers have been successfully added to TNT that significantly decrease the sensitivity of the composition to ignition stimulus, such as bullet impact and shaped charge jet impact, without significantly reducing the overall explosive performance. These desensitizers are both low cost and low toxicity materials. Two desensitizers have been added to TNT and tested for bullet impact in M795 segments with passing results. Improvements in slow cook-off were also seen in 81mm mortars. Loading studies on one of the candidate formulations, designated as PAX-44, has been performed at Iowa Army Ammunition Plant in M795 rounds resulting in a production run of 45 acceptable bullets.