

2013 Insensitive Munitions and Energetic Materials Technology Symposium,
October 07-10, 2013, San Diego, California.



STANAG 4439 Mandatory Reactions and AOP Response Descriptors: Feed-back and Considerations from Industry

Prepared by Experts of the

INSENSITIVE MUNITIONS EUROPEAN MANUFACTURER GROUP (IMEMG)

Abstract

This paper is the result of the work carried out by the Hazard Assessment and Classification Expert Working Group regarding the STANAG 4439 mandatory reactions and AOP 39 ed3 Response Descriptors. It collects the experts feed-back and considerations of the 20 companies belonging to IMEMG.

It points out some difficulties to reach full IM Signature with the maximum reactions according to stimuli and response descriptors criteria according to munitions characteristics.

For example: Type V is required to fragment impact test (18.6g @ 2530 m/s), that seems too severe taking into account credible threats; Indeed the IED, EFP or specific warheads being able to generate such a stimulus, generate also dangerous effects up to 50 m, or more, whereas any hazardous effect is admitted farer than 15 meters for the Type V response.

For fragment impact threat, response type should be type III or IV with the current descriptors. More generally, response descriptors for type V reaction appear as too strict for fragments, especially about 20 Joules criteria, previously (AOP39 ed2), it was 79 Joules; this value is universally used for injuries-to-people, i.e. to define IBD according to AASTP 1 and 4; why shall this same energy still not be used to define Type V reactions?

General analysis of response descriptors has been done by IMEMG's experts in conjunction with the Survey on Insensitive Munitions Response Descriptors done by

the MSIAC. This paper sets-up the review of current response descriptors with the IM industry experiences. It is designed to feed reflections of AC326 SGB experts