

INSENSITIVE MUNITIONS INDUSTRY CONTRIBUTION FOR THE AOP39 RESPONSE DESCRIPTORS IMPROVMENTS

ABSTRACT

IMEMG is the European Organisation that brings together the leading armament manufacturing groups working with IM technologies. It aims to express the viewpoint of the armament industry with regards to relevant transnational regulations and requirements. This paper is the result of the work carried out by the Hazard Assessment & Classification Expert Working Group regarding the review of the AOP 39 ed3 Response Descriptors. It summarizes the collective feed-back and thoughts of the experts from the 21 companies taking part to the IMEMG. It highlights several difficulties of reaching full IM Signature with the current maximum allowed reactions according to stimuli and Response Descriptors criteria and munitions characteristics. As an example, Type V is required for the Slow Heating threat; the temperature ramp associated with this threat can only occur in an enclosed space and lasts many hours. In such a context, is it really necessary that reacting ammunition shall not propel any fragment farther than 15 m with a residual kinetic energy exceeding 20 J? Given that such projections cannot even penetrate a 2 mm thick aluminium sheet, it seems more suitable to allow a type IV reaction. Alternatively, perhaps projections should not be considered for the Slow Heating threat, or maybe the Response Descriptors should be reviewed about the allowed projections. More generally, although it is a complex issue, perhaps the Response Descriptors should also be focused on the effects on personnel and platforms vulnerabilities, and not only on the munitions' response itself, independently of the munitions dimensions and the amount of energetic material they contain. In August 2013, MSIAC emitted the O-153 report "Survey on Insensitive Munitions Responses Descriptors", which raised many interesting points. This paper aims to start the review of current response descriptors based on IM industry experience. It is designed provoke the thoughts of the AC326 SGB experts in charge of the future AOP 39 4th edition.