SCHEDULE 9 Regulation 39

ESSENTIAL SAFETY REQUIREMENTS

(This Schedule reproduces, with minor modifications, the provisions of Annex 1 to the Civil Uses Directive)

PART 1

GENERAL REQUIREMENTS

1. Each civil explosive must be designed, manufactured and supplied in such a way as to present a minimal risk to the safety of human life and health, and to prevent damage to property and the environment under normal, foreseeable conditions, in particular as regards the safety rules and standard practices until such time as it is used.

2. Each civil explosive must attain the performance characteristics specified by the manufacturer in order to ensure maximum safety and reliability.

3. Each civil explosive must be designed and manufactured in such a way that when appropriate techniques are employed it can be disposed of in a manner which minimises effects on the environment.

PART 2

SPECIAL REQUIREMENTS

4. As a minimum, the following information and properties—where appropriate—must be considered or tested. Each civil explosive should be tested under realistic conditions. If this is not possible in a laboratory, the tests should be carried out in the conditions in which the civil explosive is to be used.

(a) Design and characteristic properties, including chemical composition, degree of homogeneity and, where appropriate, dimensions and grain size distribution.

(b) The physical and chemical stability of the civil explosive in all environmental conditions to which it may be exposed.

(c) Sensitiveness to impact and friction.

(d) Compatibility of all components as regards their physical and chemical stability.

(e) The chemical purity of the civil explosive.

(f) Resistance of the civil explosive against influence of water where it is intended to be used in humid or wet conditions and where its safety or reliability may be adversely affected by water.

(g) Resistance to low and high temperatures, where the civil explosive is intended to be kept or used at such temperatures and its safety or reliability may be adversely affected by cooling or heating of a component or of the civil explosive as a whole.

(h) The suitability of the civil explosive for use in hazardous environments (e.g. firedamp atmospheres, hot masses, etc.) if it is intended to be used under such conditions.

(i) Safety features intended to prevent untimely or inadvertent initiation or ignition.

(j) The correct loading and functioning of the civil explosive when used for its intended purpose.

(k) Suitable instructions and, where necessary, markings in respect of safe handling, storage, use and disposal in the official language or languages of the recipient EEA state.

(l) The ability of the civil explosive, its wrapping or other components to withstand deterioration during storage until the "use by" date specified by the manufacturer.

(m) Specification of all devices and accessories needed for reliable and safe functioning of the civil explosive.

5. The various groups of civil explosives must at least also comply with the following requirements:

(a) Blasting Explosives

(i) The proposed method of initiation must ensure safe, reliable and complete detonation or deflagration as appropriate, of the blasting explosive. In the particular case of black powder, it is the capacity as regards deflagration which is to be checked.

(ii) Blasting explosives in cartridge form must transmit the detonation safely and reliably from one end of the train of cartridges to the other.

(iii) The fumes produced by blasting explosives intended for underground use may contain carbon monoxide, nitrous gases, other gases, vapours or airborne solid residues only in quantities which do not impair health under normal operating conditions.

(b) Detonating cords, safety fuses, other fuses and shock tubes

(i) The covering of detonating cords, safety fuses and other fuses must be of adequate mechanical strength and adequately protect the explosive filling when exposed to normal mechanical stress.

(ii) The parameters for the burning times of safety fuses must be indicated and must be reliably set.

(iii) Detonating cords must be capable of being reliably initiated, be of sufficient initiation capability and comply with requirements as regards storage even in particular climatic conditions.

(c) Detonators (including delay detonators) and relays

(i) Detonators must reliably initiate the detonation of the blasting explosives which are intended to be used with them under all foreseeable conditions of use.

(ii) Delay connectors for detonating cords must be reliably initiated.

(iii) The initiation capability must not be adversely affected by humidity.

(iv) The delay times of delay detonators must be sufficiently uniform to ensure that the probability of overlapping of the delay times of adjacent time steps is insignificant.

(v) The electrical characteristics of electric detonators must be indicated on the packaging (e.g. no-fire current, resistance, etc.).

(vi) The wires of electric detonators must be of sufficient insulation and mechanical strength including the solidity of the link to the detonator, taking account of their intended use.

(d) Propellants and rocket propellants

(i) These materials must not detonate when used for their intended purpose.

(ii) Propellants where necessary (e.g. those based on nitrocellulose) must be stabilised against decomposition.

(iii) Solid rocket propellants, when in compressed or cast form, must not contain any unintentional fissures or gas bubbles which dangerously affect their functioning.