

Information on the conformity assessment procedure according to Directive 2014/28/EU for explosives

Explosives for civil use are under the scope of the European Directive 2014/28/EU¹. Explosives include specifically blasting explosives, detonating cords, propellants, black powder, explosive pre-products, detonators, relays, and delay elements. Pyrotechnic compositions are explosives in this sense, too. The Directive 2014/28/EU contains in Annex I a list of UN-numbers referring to dangerous goods regulations², which shall be regarded explosives for the purpose of the Directive. In most cases this serves as a good indication. To be seen separately are pyrotechnic articles, which are subject to a different directive dealing only with these³.

Explosives are usually subjected to two procedures, before they may be placed on the community market. The two steps are:

- the EU-type examination with verification of conformity of specimens to the requirements set out in Annex II of Directive 2014/28/EU, done by a Notified Body, and
- the assessment of the products manufactured after EU-type examination, usually by monitoring of the quality system of the manufacturer according to one of the modules of Annex III of the Directive for explosives in series production, also done by a Notified Body.

An exemption to this general procedure is the conformity based on unit verification (module G), in which no EU-type examination is performed prior to this module.

The application for EU-type examination must contain the required information according to the Directive 2014/28/EU, Annex III, module B, no. 3, especially the following:

- name or trade name of the explosive;
- name and address of the manufacturer;
- if applicable, name and address of an authorised representative, who will be responsible for the making available on the European market and for the conformity assessment procedure of the explosive; in this case a written mandate issued by the manufacturer stating that the authorised representative may engage in the conformity assessment procedure, shall be provided;
- a written declaration that the same application has not been lodged with any other notified body.

In addition, we require:

- in case of substances: information on the exact chemical composition of the sample submitted for inspection plus a suggestion on how to give ranges of the components, as it will be made publicly available through the Annex 1 of the EU-type examination certificate;
- in case of articles: sectional drawing and part list, for all explosive components their composition and mass;

¹ DIRECTIVE 2014/28/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market and supervision of explosives for civil uses (recast), Official Journal of the European Union L 96/1.

² UN RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS, model regulations.

³ DIRECTIVE 2013/29/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 12 June 2013 on the harmonisation of the laws of the Member States relating to the making available on the market of pyrotechnic articles (recast), Official Journal of the European Union L 178/27.

- information on characteristic properties (e. g. density, velocity of detonation, grain size distribution, etc.);
- suitable instructions and, where necessary, information in respect of safe handling, storage, use and disposal;
- for the type tests we need a sample of around 25 kg to 50 kg for blasting explosives, 200 m of detonating cord, and 1.5 kg in the case of pyrotechnic compositions;
- for type testing of propellants and black powder we need a sample of 5 kg;
- for type testing of detonators, relays, and delay elements we need a number of samples which depends on the offered types and delay times. The amount of samples has to be determined on a case by case basis.

Testing and services in general of BAM are subject to payment which is charged on the basis of time spent. The current hourly rate is 161 €. Costs for testing materials (consumables) are also charged. The conformity assessment of a type and issuing of documents may amount to around 7000 € for explosives and to 5000 € for propellants. Technical amendments and formal changes will cost from 500 € to 2500 €. A more exact estimation can be requested on a case-by-case basis.

The conformity assessment of the products manufactured after the EU-type examination during production of explosives has to follow one of the modules C2, D, E or F set out in Annex III of the Directive. In all cases a notified body has to be involved. In the following the modules are described very briefly.

Module C2 is based on picking samples statistically from production by the notified body and the subsequent verification of parameters meaningful for quality and verification of agreement of the sample with the approved type. Module C2 requires the manufacturer to have internal quality control. Picking samples is in the responsibility of the notified body. Costs for testing of one explosive depend on the type of explosive and could range between 1000 € and 7000 €. Module C2 is most suitable for intermediate products and for explosives with a very simple design.

Modules D and E are based on inspections of quality control measures of the manufacturer. An inspection takes place every 2 to 3 years, which takes usually 1 to 2 days at the production site. Where the manufacturer has a quality control system in agreement with ISO 9001 in place, this can support the assessment process. The cost of an eight-hour audit by two auditors is approximately € 2600, plus the cost of travel and accommodation and travel times considering the hourly cost rate.

Modules F and G are based on an individual inspection of each explosive manufactured and require a case by case decision.

The European Commission has published a guidance⁴, which further details obligations of the manufacturer, importer, and authorised representative.

EU-type examination certificates issued by BAM are usually in German language. A bilingual version with German and English is available on request. On successful type examination the type examination certificate is joined by 2 Annexes (identification, handling instructions), plus the confidential examination report and the confidential assessment report.

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⁴ THE 'BLUE GUIDE' ON THE IMPLEMENTATION OF EU PRODUCT RULES, to be found in the internet at ec.europa.eu.