Identification and traceability of explosives for civil uses, as laid down in Commission Directive 2008/43/EC of 4 April 2008, adopted pursuant to Council Directive 93/15/EEC, as amended by Directive 2012/4/EU

QUESTIONS AND ANSWERS DOCUMENT FOR USERS
As 17/04/2015

Explosives for civil uses Task Force[1]

The objective of this Questions & Answers documents for users is to support a better awareness of end users on the implementation of the Directive to fully comply with the provisions by 5 April 2015.

Table of Questions (hyperlinked)**:**

Questions & Answers:

A. Why a Directive on traceability of explosives for civil uses?

- It was a specific requirement of Directive 93/15/EEC, in order to:
    - Ensure the secure circulation of explosives on the community market
    - Identify undertakings holding explosives at any time in the whole sector and keep accurate and complete records of explosives at all stages by the supply chain
- Public security is a common commitment for all the supply chain of explosives for civil uses

B. What are the benefits of this Directive?

- Provide an Unique identification of explosives which:
    - Prevent misuse and theft of explosives, and assist law enforcement authorities in the tracing of the origin of lost or stolen explosives, an activity which is particularly important in the fight against terrorism and organised crime
    - Allow a harmonised, secure and competitive market

C. Who are involved?

- All the supply chain from the manufacturer / importer /distributor to the end user, including the competent authorities and transport in terms of movement of explosives.

D. What is an end user?

- The end user would be the last undertaking to take possession or custody and to use the explosive, for example operating blasting on site. In certain cases this could be the sub-contracting company undertaking the blasting.

- In other words, those responsible for the last place of storage on a site prior to use should keep records from the time they take possession or custody of the explosive until it is used.

- It should not however normally be necessary for records to be kept on the individual person,

such as the individual shot-firer, to whom the explosive is given to use.

E. *What are the legal responsibilities of an end user?*

- Member States lay down rules on penalties applicable to infringements of the provisions of national law adopted pursuant to this Directive and ensure that those rules are enforced. The penalties provided for should be effective, proportionate and dissuasive.

- Legal responsibilities of undertakings as end users are affecting the whole chain from the CEO of the company to the single worker with any relationship with the explosives (shoot-firer, technical supervisor, administrative responsible for the custody of the explosive and products information, …)

- It is highly recommended for end user companies to clearly define an internal procedure to identify the chain of control of the explosive and related on-site information including the names, job positions and responsibilities along the supply chain.

F. *What are the main obligations for an end user?*

a.   Put in place a system for collecting data in relation to explosives including their unique identification throughout the supply chain and life cycle.

  o The system could be digital or manual.

  o Keeping a record of all identifications of explosives – identification code, together with all pertinent information including the type of explosive, the company or person to the custody of whom it was given.

  o The volume and the complexity of the collected data can lead to the choice of an electronic system.

b.   Record the location of each explosive while the explosive is in their possession or custody until it is used

  o Each end user has to define a procedure to grant that there is no gap in the traceability and identification of custody between the reception of the explosive and its use in regards to the law.

  o In the activities of reception, use of the explosive, and/or storage on-site, which can be coupled or separated activities, the chosen procedures have to be notified clearly for data process management to Track and Trace suppliers.

c.   At regular intervals test their data collection system in order to ensure its effectiveness and the quality of the data recorded.

d.   Protect the data collected against accidental or malicious damage or destruction.

e.   Maintain the information for a 10 years period after the end of the life cycle of the explosive even if the company has ceased its activity.

f.   Inform the competent authorities upon their request (24/24 hours a day, 365 days a year, 10 years) concerning the origin and location of each explosive.

g.   Provide the responsible Member State authorities with the name and contact details of a person able to provide the information described.

G. *When the system has to be in place for end users?*

- The deadline is the **5 April 2015**. From this date, each end user will need to have a proper system in place.

- **Nevertheless the experience shows that the ordering of devices, implementation of the system and the testing of the materials as well as the training of the users takes time and it is highly recommended that you start no later than September 2014.**

H. What will happen if the system is not in place on my site in due time?

- Existing explosives in each site must be marked, identified and controlled according with the provisions of the Directive, to avoid any infringement to the laws and legal responsibilities.

- In case no system has been put in place to trace and identify explosives, the competent authority could stop the supply of explosives which would have an economic impact on the development of the activities.

I. Are all the explosives affected by the Directive?

- Most of the explosives and articles are under the scope of the Directive. Nevertheless, there are few exemptions:

  - Explosives transported and delivered unpackaged or in pump trucks for their direct unloading into the blast-hole.

  - Explosives manufactured at the blasting sites, and that are loaded immediately after being produced (in situ production).

  - Ammunitions.

  - Fuses, which are cord-like non-detonating igniting devices.

  - Safety fuses, which consist of a core of fine grained black powder surrounded by a flexible woven fabric with one or more protective outer coverings and which, when ignited, burn at a predetermined rate without any external explosive effect.

  - Cap-type primers, which consist of a metal or plastic cap containing a small amount of primary explosive mixture that is readily ignited by impact and which serve as igniting elements in small arms cartridges or in percussion primers for propelling charges.

J. Are small articles included?

- For articles too small to affix all the information, or where it is technically impossible due to their shape, design or specification (diameter ≤ 8,5 mm), full marking requirements do not apply – see point 3 of Annex to Directive and FEEM technical guidance document "Small Articles".

K. How does the system work?

- The explosive manufacturer or importer has to identify each explosive under the scope of the Directive with an unique code, using the FEEM code on a voluntary basis.

- With each delivery of explosives, they will generate a file containing all the information for the identification and traceability, to be sent to the next undertaking into the supply chain.

- It is the responsibility of each undertaking receiving explosives to verify if the explosives and products supplied are the same than the information received by the file from the supplier.

- The end user has to record the explosives in 2 ways: those to be directly used and those to be stored for next blasting operations.

- All the information has to be permanently available for responsible national authorities, 24/24 hours a day, over 365 days a year, during 10 years.
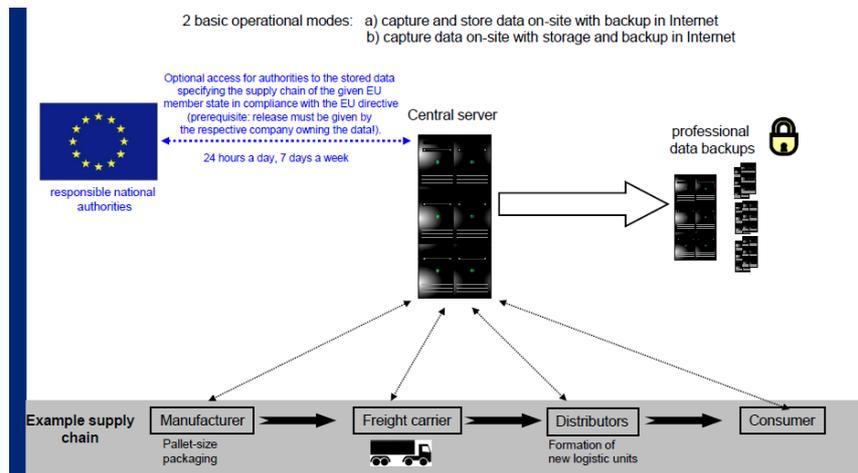
L. What is the information I will receive from the supplier?

- Each explosive supply will be followed by an XML file sent by the supplier with all the information for the identification and traceability of the explosive.

- Additional documents, used according to national provisions in force before the Directive, will also be received.

M. Why a single code for all EU?

- For safety and security reasons, all the Member States have to be able to exchange information on explosives in a prompt, comprehensible and consistent way.

- The FEEM code has been agreed by all the EU explosives manufacturers as a common criterion on a voluntary basis at European level, and promoted as such by the European Commission and stakeholders of the whole supply chain.

- This code allows for homogenous and compatible information from different suppliers of different countries.

- It provides the whole supply chain with an efficient common system for the management of information.

N. How is the code?

- The code can be in a data matrix, bar code or alphanumeric formats, but always with a human readable part:

- The unique identification shall comprise:
    - a human readable part of the identification containing the following:
    - the name of the manufacturer;

- o an alphanumerical code containing:

- o two letters identifying the Member State

- o three digits identifying the name of the manufacturing site

- o the unique product code and logistical information designed by the manufacturer;

- o an electronic readable identification in barcode and/or matrix code format that relates directly to the alphanumerical identification code

- A guidance note made by The Federation of European Explosives Manufacturers (FEEM) on voluntary basis and as such supported by the European Commission, the European Commission Working Group on explosives for civil uses, where all Member States are present, and the Explosives for civil uses Task Force.

- The structure of the files is:

FEEM AI

AI	Field	Digits	Format	Length	Notes
(90)	Country & Production Site No.	5	Alpha-Numeric	Variable but fixed (5)	Mandatory
(250)	Unique Item No	30	Alpha-Numeric	Variable	Mandatory
(20)	Determination of items and logistical units	2	Numeric	Fixed	Optional
(11)	Production Date	6	Numeric	Fixed	Optional
(240)	Product Code	30	Alpha-Numeric	Variable	Optional
(10)	Batch Number	20	Alpha-Numeric	Variable	Optional
(37)	Trade Quantity	8	Numeric	Variable	Optional
(30)	Quantity	8	Numeric	Variable	Optional
(310n)	Net Explosive Quantity	6	Numeric	Fixed	Optional
(311n-316n)	Unit of Measure	6	Numeric	Fixed	Optional
(330n)	Gross weight	6	Numeric	Fixed	Optional
(91) – (99)	Internal Use	30	Alpha-Numeric	Variable	Optional

The following three fields may be used according to the GS1 definitions:

(01)	GTIN	14	Alpha-Numeric	Variable	Optional
(21)	Serial Number for GTIN items	20	Alpha-Numeric	Variable	Optional
(00)	SSCC – Serialized Shipping Container code	18	Numeric	Variable	Optional

O. Are XML formats unique?

- The Federation of European Explosives Manufacturers Guidance Note has been agreed as voluntary XML file format reference, and as such supported by the European Commission, the European Commission Working Group on explosives for civil uses, where all Member States are present, and the Explosives for civil uses Task Force.

- XML provides a common and systematic structure for electronic business messages, enabling business partners to communicate business data rapidly, efficiently and accurately, irrespective of their internal hardware or software types.

- The provision of data about shipment content and the packaging hierarchy to all entities of the supply chain is a need, since every undertaking has to collect and store information about every single item.

- The explanation of XML files structure code can be found in the FEEM Guidance Note above mentioned.

P. What happens if a national system for track and trace of explosives is already in place?

- The Member State has to comply with the provisions of the Directive by 5 of April 2013 and with provisions of articles 3(6), 13 and 14 by 5 April 2015.

- The laws of a Member State may already comply with this outcome; in this case, the state involved would be required only to keep its laws in place. More commonly, Member States will be required to make changes to their laws (commonly referred to as transposition) in order for the directive to be implemented correctly.

- If existing national legislation is complying with the provisions of the directive, all the procedures might be included in a single one to reduce the administrative burden and avoid redundancy and duplication.

Q. What should be the process to request an explosives supply?

- In principle, the Directive is not affecting the previous national regulations and procedures for explosives supply request.

- Nevertheless, new software and hardware can help to introduce online procedures and online management to be implemented by and with national competent authorities on secured servers.

R. How the public security will be improved?

- Identification and traceability of explosives will allow to permanently localise explosives during its life cycle, as well as undertakings and persons involved in its management and use for the main purpose of public security.

- Online systems will have a preventive effect, since any inconsistency will be immediately detected by control authorities, and then appropriate measures could be implemented if this is the case.

S. What do I have to do when consuming explosives on site?

- When implementing the Directive, Member States can have additional provisions and requirements.

- End users have the obligation to record the identification code (alphanumeric, bar or matrix code), keep and maintain the data collected including the unique identifications for a period of 10 years after the delivery.

- Depending on the use of the explosives on site, the amount of information could be very high. End users have to decide if an ITT system will be beneficial in terms of saving time in collection storage and information of data to be retrieved by competent authorities.

- Running a software and having tracking hardware devices could facilitate handling large volumes of data. For end users using a small amount of explosives a year, manual data collection and record-keeping documentation should be sufficient.

- Depending on each site organisation and features, the actions to be done from the reception to the consumption of the explosive, including temporary storage could be very different. But common recommendations can be given:

  o The responsible for the reception of the supply has to be present when the explosive is delivered.

  o All the persons in contact with the explosives from the reception to the blasting, including the storage, the information management or the surveillance have to be

previously identified and notified to competent authorities.

- o The end user has to grant that the custody chain of the explosive is never broken, with appropriate working procedures.

  - ➢ **Do never forget** that the company (from the CEO to worker on site) is responsible in the case of the explosive under its control is stolen.

- o All the health and safety measures regarding explosives' transport, handling and blasting have to be respected and integrated into each end user operational procedures.

- o When required, surveillance measures for explosives have to be in place according to national regulations.

- o When required, safety and surveillance measures for on-site explosive storage devices should apply according to national regulations.

T. *What are the typical devices that should help me to simplify my duties?*

- ▪ There are a lot of different devices with different designs, price ranges and safety classes available, depending on the needs for the specific tasks:

- ▪ The lowest-priced solutions are wired hand scanners which need to be used in conjunction with a laptop or PC. This solution is not suitable for most of the common on site applications in storage rooms or quarries. Anyway it might be a good choice for small companies with in-house processes only.

- ▪ The standard solutions in the logistics sector are small mobile computers with a build-in scanner, keyboard and usually a pistol grip. These are called mobile devices for barcode / data matrix code scanning or usually just mobile devices. They combine maximum stability, longevity and easy handling together with long battery running times. All the major transport and logistics companies world-wide have been using these for years.

- ▪ Within the last couple of years rugged tablets have also appeared on the market, with a built-in or external scanner attached to them. Because of their large display they never reach the ruggedness and stability of mobile devices and it is often not possible to use them with just one hand. Because of that, they are usually just found in a few special areas of track and trace solutions. Also battery life is very limited in most of the cases.

- ▪ Many devices have built-in radios to exchange data via mobile networks.

- ▪ Since the selection of devices depend very much on the users processes all suppliers should provide solutions for a range of devices.

- ▪ In most countries it is not required to use ATEX certified devices, except in coal mines. Nevertheless often additional security caps are required to hide open contacts.

- ▪ It is important to mention at this point, that the end user chooses a system provider who can also offer additional training for the chosen mobile devices, because it is very likely that the people in charge of track and trace on site have never used such devices before.

- ▪ Electronic devices to be used to record the information have to be safe to avoid any risk related with potential detonation. Hardware suppliers have safe optical readers available, with safety certifications.

- ▪ Electronic devices have to be harmonised to the relevant EU and National laws in order to guarantee users that they comply with the internal market rules for products.

U. *What happens when the blasting operation is suspended?*

- In these cases, if the blasting operation has to be suspended, then the explosive supplier has to verify that the returned explosive is the same that it was delivered (if it is not stored on-site). It would be like an inverse supply.

V. What happens when a certain amount of explosives has to be returned to the supplier?

- In these cases, *when a certain amount of explosives has to be returned to the supplier*, then the explosive supplier has to identify the returned explosive (if it is not stored on-site or it cannot be destroyed). It would be like an inverse supply.

W. What do I have to do if there is an unexpected problem with the system?

- If the collected information on site is not corresponding to the files received and/or if the explosives received is not corresponding with the collected information, then, the first action is to contact the supplier to identify the issue.

- If the problem or discrepancy is not immediately solved, national competent authorities have to be alerted.

- If the label is not readable you have to distinguish several cases:

- Barcode / Data Matrix Code is not readable by the mobile device, but the alphanumeric part is still human readable:

  o Type in the unique identification number by hand

- Label is completely missing or nothing on it is readable:

  o Packing label: You have to drop down one level in the hierarchy of the shipment and scan all explosive items inside the package individually

  o Explosive item label: You have to report this incident to the competent authorities[2] [3]!

- If the electronic devices are not running properly when the explosives are received, suppliers have to be informed and able to store the information for the time being and redistributed after the problem is solved by the undertaking.

- If the data exchange fails during the delivery of the explosives to the end user, because the data format is not readable by the end users system or the provided USB stick with the data is unreadable or compromised, every single item of the delivery has to be scanned in individually.

- To prevent this from happening, it is highly recommended to choose a system provider who offers a standard interface to all systems used in the supply chain and also provides access to an online data centre that takes care of the data exchange, by automatically converting the data from different suppliers and distributors to the appropriate format for the end user. The existing European standard system for online data exchange is supported by all major explosives manufacturers.

X. What do I have to do when I have explosives not complying with the new Directive?

- Every explosive in your stocks not complying with the new codification system must be used

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[2] A question was sent to the European Commission to receive Official replies from Members' States

[3] The problem in the last case is that even if the explosive is used, the data in the stock book will still show the item, so there is going to be a discrepancy between the stock book and what is actually in storage.

before the 5 April 2015.

Y. How long do I have to keep the record of information?

- Keeping a record of all identifications of explosives, together with all pertinent information including the type of explosive, the company or person to the custody of whom it was given; (...) for a period of 10 years after the delivery or whenever known after the end of the life cycle of the explosive even if undertakings have ceased trading.

- If the undertaking and/or the end user have a contract with a software supplier, the contract has to specify all responsibilities, e.g. when the identification of the explosive is captured and stored on-site if the backup system is on an internal or external server. The contract has to include the storage and availability of information for the compulsory period of 10 years.

Z. Do I have to test and verify the data collection system?

- Yes, at regular intervals end users have to test their data collection system in order to ensure its effectiveness and the quality of the data recorded.

- The goal is to protect the data collected against accidental or malicious damage or destruction.

- Again, the contract with the software supplier has to specify the procedures to test and verify the data collection system.

- If the undertaking is collecting the information with internal methods, a procedure has to be established and documented to testify and verify the data collection within the compulsory time.

AA. Does the information collected need to be available for competent authorities?

- Yes, end users as each stakeholder, have to provide to the competent authorities, upon their request, only with information regarding its own possession period concerning the origin and location of each explosive during its life cycle and throughout the whole supply chain.

- End users have also to provide the responsible Member State authorities with the name and contact details of a person able to provide the information described in the previous point outside normal business hours.

BB. Do I need to inform and train people responsible for the use of explosives?

- It is highly recommended for end user companies in cooperation with explosives' suppliers, track and trace programmers and competent educational systems, to inform and train direct and indirect employees working with explosives on the track & trace system and on the legal responsibilities to comply fully and safely with the law.

- Since they are also assuming responsibilities, they are of high importance to achieve a proper control in order to clearly prevent failures leading to legal responsibilities for them or for the company and its representatives.

- An end user guidance document made of recommendations is available on the Explosives for civil uses Task Force *(document will be drafted, discussed and agreed by the Task Force meeting).*

CC. Who can help me with practical recommendations to implement the system for track and trace?

- o Explosives manufacturers, importers and distributors
- o Many explosives manufacturers have helpdesks on their websites
  - Software and hardware suppliers

DD. *Where can I have further updated information?*

- European Commission
  - o http://ec.europa.eu/enterprise/sectors/chemicals/documents/specific-chemicals/explosives
- Competent National authorities
  - o http://ec.europa.eu/enterprise/sectors/chemicals/files/explosives/national-authorities-explosives_en.pdf
- Notified bodies
  - o http://ec.europa.eu/enterprise/sectors/chemicals/files/explosives/contacs_notified_bodies_en.pdf
- Explosives for civil uses Task Force – (European and National Associations)
  - o http://www.explosives-for-civil-uses.eu

EE. *Other sources of information*

- European Commission Explosives: Page & Directives: (Documents are translated in 23 Languages)
  - o http://ec.europa.eu/enterprise/sectors/chemicals/documents/specific-chemicals/explosives/
  - o http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:094:0008:0012:EN:PDF
  - o http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:050:0018:0020:EN:PDF
- Other information sources with a direct access for users:
  - o QUESTIONS AND ANSWERS CONCERNING THE IMPLEMENTATION OF DIRECTIVE 93/15/EEC
  - o FEEM European Explosives Code Structure
  - o FEEM definitions of small articles
- The document will be linked to the website when online