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# OCCUPATIONAL QUALIFICATION STANDARDS

## EOD2 Technician, Level 4

**The Occupational Qualification Standards are documents** that describes the work, a set of skills, knowledge and attitudes or competency requirements for successful performance of the work.

### Uses of the professional standards

- 1) Compilation of curricula and training programs meeting the requirements of the labor market.
- 2) Assessment of people's competency, including self-assessment and assessment of conformity on awarding of a profession;
- 3) Description and presentation of the occupations;
- 4) Career planning and laying the foundations for lifelong learning;
- 5) Identification of training needs and planning thereof;
- 6) Preparation of job descriptions and recruitment of employees;
- 7) A comparison of occupations and qualifications.

Occupational Title	Estonian Qualifications Framework (EQF) level
EOD2 Technician, Level 4	4

## Part A DESCRIPTION OF WORK

### A.1 Description of work

In the EOD (Explosive Ordnance Disposal) Technician occupational qualification is the occupational qualifications of EOD1 technician, EOD2 technician, EOD3 technician, EOD4 technician and EOD Technician-Instructor. Organization of the job training of the demining center and drawing up of training is based on international EOD training principles and safety rules; the name of the occupational qualification contains the acronym EOD.

The job of EOD1 technician is to assist in identifying explosive ordnances and the destruction of explosive ordnances identified in the place where they are found.

The job of EOD2 technician is to assist in evaluation and determination of the level of safety of the items found, to move the item safely and to transport one or more items.

The job of EOD3 technician is to identify the explosive ordnances and to assess the levels of safety of the items found, perform the procedures for recovery and to destroy any kind of ammunition.

The EOD4 technician is a specialist who has been trained and qualified to destroy the objects that require special techniques and skills, especially for the handling of explosive devices and other improvised explosives (e.g., liquids in rocket engines, the munitions filled with depleted uranium, etc.).

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An EOD technician-Instructor is a professional who has passed all stages of mine clearance courses and acquired a relevant competency. The job of the EOD technician-instructor is supervision, analysis of demining data and transfer of knowledge.

The goal of the EOD2 technician is to assist higher level EOD technicians in the activities related to countering of bomb, munitions or explosion threats on land and inland waterways. Generally, he or she works under the guidance of a higher level EOD technicians but performs easier (repetitive) tasks independently.

EOD2 technician works in a team; the work involves interaction with colleagues, officials and private persons.

**A.2 Work Units**

The occupational qualification of an EOD2 technician consists of mandatory and elective work units.

**MANDATORY WORK UNITS**

- A.2.1 Planning and organization of work
- A.2.2. Performance of blasting
- A.2.3. Countering of bomb threats
- A.2.4. Countering of munitions threats
- A.2.5.Countering of explosion threats

**THE SELECTED WORK UNITS**

- A.2.6 Using of an explosive detection dog EOD1
- A.2.7 Using of an explosive detection dog EOD3
- A.2.8 Instructor of using of an explosive detection dog

The list of work tasks related to work units is provided in Annex 1 "Work units and work tasks" of the occupational qualification standard.

**A.3 Working environment and the specificity of the work**

The EOD technician works in a work environment with a heightened threat. His or her work environment is influenced by physical, chemical, physiological and psychological factors. The work is carried out both outdoors and indoors, and requires occasional physical effort. Employees must be aware of the health and environmental risks occurring in the work. The work is mentally and emotionally stressful, requires working at night, on weekends and public holidays. The main threats are injuries, illnesses, and work traumas resulting from explosions and chemicals, also possible are any adverse health effects caused by various biological, chemical, natural and physical factors. In operation, it is important to meet the occupational safety rules and use personal protective equipment. Use of the bomb suit requires that the OED technician is in good physical shape.

**A.4 Work equipment**

The main tools of the EOD technician are protective clothing and protective equipment, explosives, water cannons, special charges, metal detectors, bomb robots, GPS devices, communications equipment, x-ray devices, cameras and video cameras, observation technical aids, bomb containers, support techniques and equipment (boat, backhoe, ATV, etc.).

**A.5 Personal characteristics necessary for the work: aptitude and personality traits**

On working on the occupational qualification of the EOD technician the following are recommended



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personality traits, skills, and abilities:

- loyalty to the Republic of Estonia, honesty, dedication and obedience to the law;
- decision-making, responsibility, and self-regulatory capacity, including the ability to stably and efficiently operate under pressure and the ability to perform teamwork;
- tolerance, perseverance, creativity and openness, with good communication skills.

#### **A.6 Professional training**

Generally, an EOD2 technician has a secondary education and has completed the training required in the training program of an EOD technician and the occupational skills acquired in the workplace. An EOD technician (EOD2) has been working as an EOD1 technician for at least two years.

#### **A.7 The most common job titles**

EOD technician.

#### **A.8 Regulations for operating in the occupational qualification**

Working in the area of mine clearance is governed by the laws and requirements in force in the Republic of Estonia (Civil Service Act, Rescue Act, Rescue Service Act, etc.), and the regulations and other legislation following IMAS-standards (International Standards in Action).



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## Part B COMPETENCY REQUIREMENTS

### **B.1. Structure of the occupational qualification**

The occupational qualification of an EOD2 technician (EOD1) consists of five mandatory and three optional competencies.

Upon application for the occupational qualification, certification is required of the mandatory competencies B.2.1 - B.2.5 and B.2.9 (transversal competencies).

Of the optional competencies (B.2.6 - B.2.8) it is possible to select the competence of the appropriate level in the areas of operation of the use of an ED dog. The indication on certification of the optional competency shall be entered in the certificate of the occupational qualification.

### **B.2 Competencies**

#### **MANDATORY COMPETENCIES**

<b>B.2.1 Planning and organization of work</b>	<b>ECT Level 4</b>
<u>Performance indicators</u>	
<p>1) Uses personal protective equipment (flak jacket, helmet, etc.), according to the safety instructions for mine clearance works, prepares for the team the equipment used on a mine clearance task depending on the mine clearing operation and in accordance with the orders of the leader of the mine clearing work, uses the prepared equipment in a lower category;</p> <p>2) Prepares the equipment for prevention and outreach work in accordance with the orders of the higher level EOD technician and helps to perform prevention and outreach work in accordance with the orders.</p>	
Assessment Method(s): Practical work, test.	
<b>B.2.2. Performance of blasting</b>	<b>ECT Level 4</b>
<u>Performance indicators</u>	
<p>1) Assists the leader of mine clearance work in the preparation of blasting and the limitation of the danger zone in accordance with the orders of the leader of mine clearance work, taking into account the safety instructions for the mine clearance. Prepares the explosive means and charges, prepares the igniter(s), using personal protective equipment (flak vest, helmet, etc.), and taking into account the safety instructions for mine clearance work;</p> <p>2) Assists in the performance of blasting made for countering a bomb threat, assists in the preparation of the equipment needed in accordance with the orders of the leader of mine clearance work; assists the police and rescuers in limiting the danger zone in accordance with the orders of the leader of mine clearance work; protects the EOD technician directly involved with countering a bomb threat or if necessary, prepares the charges; after the event, maintains the equipment in accordance with its specifications and the requirements set for the equipment;</p> <p>3) Assists the leader of mine clearance work at the site of blasting in the preparation of blasting related to the countering of the munitions threat; assists in the preparation of the equipment needed in accordance with the orders of the leader of mine clearance work; ensures the inviolability of the danger zone, limiting it in accordance with the orders of the leader of the mine clearance work, taking into account the safety instructions for the mine clearance work and using personal protective equipment (flak vest, helmet, etc.); assists the leader of mine clearance work in preparing charges or prepares them in accordance with the orders of the leader of the mine clearance work, after the event maintains the equipment in accordance with its specifications and the requirements set for the equipment, participates in a follow-up check of the blasting site according to the safety instructions in order to avoid</p>	



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the presence of explosive residues.

Knowledge:

- 1) types and parameters of explosions;
- 2) the effects of explosions on humans, facilities, and the environment;
- 3) determining the safe distance of the explosion;
- 4) ways of reducing the impact of the explosion, the protective measures;
- 5) signals necessary for blasting.

Assessment Method(s): Practical work, test.

**B.2.3. Countering of bomb threats**

**ECT Level 4**

Performance indicators

- 1) prepares the equipment for the detection of a bomb threat in accordance with the orders of the leader of mine clearance work; if necessary, inspects the object in accordance with the orders of the leader of mine clearance work;
- 2) prepares the equipment for the detection of a bomb threat in accordance with the orders of the leader of mine clearance work; uses personal protective equipment (flak vest, helmet);
- 3) in accordance with the orders of the leader of mine clearance work, prepares the equipment necessary for bomb technical inspection; if necessary, checks the object in accordance with the orders of the leader of mine clearance work; uses the personal protective equipment (at least the flak vest) according to the specific nature of the bomb technical inspection;
- 4) prepares the equipment in accordance with the orders of the leader of mine clearance work; inspects the secondary hazards in accordance with the orders of the leader of mine clearance work; uses personal protective equipment in accordance with the specific nature of secondary hazards.

Knowledge:

- 1) the defensive capacity of personal protection equipment;
- 2) observation technical aids and their use.

Assessment Method(s): Practical work, test.

**B.2.4. Countering of munitions threats**

**ECT Level 4**

Performance indicators

- 1) handles the more common live ammunition and ordinances used for work and found during the mine clearance, ensures safety in accordance with applicable laws; identifies the more common live ammunition and ordinances found during the mine clearance under the guidance of an OED technician of a higher level, assists him or her in the destruction thereof;
- 2) assists the higher level OED technician in preparation of the tools and special equipment intended for mine clearance work, performs the primary operations related to the found munitions or searching in accordance with applicable laws; uses personal protective equipment in the mine clearance work;
- 3) assists the higher level OED technician in demarcation of the minefield, a former battlefield or polygon and its surroundings in accordance with IMAS standards (*International Mine Action Standards*); cleans the area of vegetation, punctures the ground, searches and localizes wire traps using the intended tools, performs assistant work in the minefield outside the danger zone in accordance with the orders of the higher level OED technician; uses personal protective equipment in accordance with IMAS standards, when working in a minefield uses a metal detector and a bomb detector.

Knowledge:

- 1) types and construction of ammunition and munitions;
- 2) the types of explosive charges and their installation;
- 3) minefields installation methods and the types of minefields;



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4) tactics of a mine-clearing groups when searching for munitions.

Assessment method(s): Practical work, test.

### B.2.5. Countering the explosion threat

ECT Level 4

#### Performance indicators

1) assists the leader of mine clearance work in the performance of the work related to the countering of a munitions threat, assists with the preparation of the necessary equipment on the orders of the leader of the mine clearance work; ensures the inviolability of the danger zone, limiting it in accordance with the orders of the leader of mine clearance work, taking into account the safety instructions for the mine clearance work and using personal protective equipment (flak vest, helmet, etc.); if necessary, identifies the found munitions and checks the immediate vicinity of the location; after the event maintains the equipment in accordance with its specifications and the requirements set for the equipment.

#### Knowledge:

1) Types and parameters of explosions.

Assessment Method(s): Practical work, test.

## OPTIONAL COMPETENCIES

### B.2.6 Using an explosive detection dog EOD1

ECT Level 4

#### Performance indicators

1) according to the supervision of a higher level OED technician ensures for the dog the necessary daily movement, feeding and care;  
2) teaches and trains a dog in accordance with the instruction of the higher level dog handler;  
3) fulfills the orders of the mine clearance manager at the scene, uses personal protective equipment (flak vest, helmet, etc.) in accordance with applicable laws.

#### Knowledge:

1) basics of dog training, the instincts, the development stages, the senses, the learning processes;  
2) dissemination of explosives and odor molecules.

Assessment Method(s): Practical work, test.

### B.2.7 Using of an explosive detection dog EOD3

ECT Level 5

#### Performance indicators

1) for the dog the necessary daily movement, feeding and care, monitors the health condition of the dog and notifies the higher level OED technician of the necessity of performance of veterinary procedures;  
2) teaches and trains a dog in accordance with the instruction of the higher level dog handler; organizes individual trainings for the dog according to the training plan; instructs other dog handlers on training of dogs;  
3) uses the appropriately trained dog on detection of explosives; coordinates the use of ED dogs at the scene; performs the orders of the leader of the mine clearance work at the scene, uses personal protective equipment (flak vest, helmet, etc.) in accordance with applicable laws; where necessary, fills the tasks of the leader of mine clearance work at the scene, makes proposals for organization of the necessary training.

#### Knowledge:

1) basics of dog training, the instincts, the development stages, the senses, the learning processes;  
2) dissemination of explosives and odor molecules;  
3) the possibilities and the purpose of using ED dogs in response to bomb incidents;  
4) the use of the bomb suit on dog training and calls.



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Assessment Method(s): Practical work, test.

**B.2.8 Instructor for using an explosive detection dog**

**ECT Level 6**

Performance indicators

- 1) ensures for the dog the necessary daily movements, feeding and care; monitors the health condition of the ED dogs and coordinates the performance of veterinary procedures, selects the appropriate ED dogs for the operation, organizes the provision of the ED dogs with the necessary equipment and food; keeps abreast on innovations in dog breeding, care and keeping, and introduces them among other dog handlers;
- 2) in accordance with the applicable laws, plans and organizes training for dog handlers and dogs, creates new or complements the old teaching materials; organizes the evaluation of dogs in accordance with the annual plan of the EOD Centre, keeps abreast of new trends and methodologies in the profession and applies them to organized training; if necessary, performs the tasks of the EOD technician of other levels on training and education ED dogs;
- 3) if necessary, performs the tasks of the leader of the mine clearance work at the scene; uses personal protective equipment (flak vest, helmet, etc.) in accordance with applicable laws; uses the appropriately trained dog on detection of explosives; coordinates the use of ED dogs at the scene; analyses the performance of the calls occurred and takes into account the results thereof in preparing training plans, participates in the development of the strategies and tactics for the use of ED dogs in accordance with the nature of the calls.

Knowledge:

- 1) basics of dog training, the instincts, the development stages, the senses, the learning processes;
- 2) dissemination of explosives and odor molecules;
- 3) the possibilities and the purpose of using ED dogs in response to bomb incidents;
- 4) the use of the bomb suit on dog training and calls.

Assessment Method(s): Practical work, test.

**TRASVERSAL COMPETENCIES**

**B.2.9 EOD2 Technician, level 4, transversal competencies**

**ECT Level 4**

Performance indicators

- 1) in compliance with applicable laws, transports the explosives and ensures the undisturbed state of the explosive substances at the scene of event and/or its destruction; assists an OED technician of a higher level of using explosive substances for preventing an explosion, on destroying munitions, on rescue work for preventing the spread of hazardous substances and on organization of a mine clearance exercises, examines the explosives before use; uses personal protective equipment in accordance with the order of the leader of the mine clearance work;
- 2) provides any victim(s) life-saving first aid in accordance with the requirements of the provision of first aid;
- 3) performs emergency driving, taking into account the current laws and the specific nature of mine clearance work;
- 4) participates in the post-event analysis, expresses the emotions associated with the event, formulates and expresses their understanding of the event, formulates the principles of their activities and relates them to the event as they happened, makes suggestions for changes in his or his team's future activities, makes suggestions for the future implementation of the lessons learned;
- 5) uses in her or his work the computer on the levels: AO1 - Basic Concepts of Information Technology and the Information Society, AO2 - Using the Computer and Managing of Files, AO3 - Word Processing, AO5 - Databases AO7 - Information and communication (see Annex 2 "Computer proficiency criteria");



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6) uses in his or her work the Estonian language at level B2 and one foreign language (preferably English) at level A2 (see Annex 3 "The scale of evaluation of language proficiency").

Assessment Method(s):

Transversal competencies are assessed in an integrated way in the course of the assessment of other competencies provided in the occupational standards.





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## Part C GENERAL INFORMATION AND ANNEXES

<b>C.1 Information for the preparation and approval of the occupational standard, the awarding body, and a reference to the location of the occupational standard in the classifications</b>	
1. The marking of the occupational standard in the occupational qualification register	18-03092012-02/1k
2. Occupational qualification standard prepared by:	Ando Piirsoo EOD Center of the Rescue Board Arno Pugonen, EOD Center of the Rescue Board Margus Möldri, Academy of Security Sciences Reelika Ein, Rescue Board
3. Occupational qualification standard approved by	Professional Council for Legal Protection and Public Defense
4. Professional Council Decision No.	7
5. Date of Professional Council Decision.	03.09.2012
6. Occupational standard valid until (date)	02.09.2017
7. Occupational standard version number (1-n)	1
8. Reference to the Classification of Occupations (ISCO 08)	54
9. Reference to the European Qualifications Framework (EQF)	4
<b>C.2 Occupational title in a foreign language</b>	
In English EOD Technician	
In Russian Взрывотехник	
In Finnish Miinaraivaaja	
<b>C.3 Annexes</b>	
Annex 1 Work units and work tasks Annex 2 The Criteria of Computer Proficiency Annex 3 Language proficiency assessment scale	

**Work units and work tasks**

		EOD1 Technician Level 4	EOD2 Technician Level 4	EOD3 Technician Level 5	EOD4 Technician Level 5	EOD Technician- Instructor, Level 6
<b>1. Planning and organization of work</b>						
1.1	Use of equipment of the bomb group	x	x	x	x	x
1.2	Management of demining operations on the scene			x	x	x
1.3	Planning and organization of blasting			x	x	x
1.4	Organization and conducting of information and prevention work	x	x	x	x	x
1.5	Arranging and conducting training			x	x	x
<b>2. Performance of blasting</b>						
2.1	Preparation for blasting	x	x	x	x	x
2.2	Performance of blasting for countering a bomb threat	x	x	x	x	x
2.3	Performance of blasting for countering a munitions threat	x	x	x	x	x
2.4	Countering the threat from an explosive devices with an explosive			x	x	x
2.5	Blasting in police and rescue operations			x	x	x
<b>3. Countering of bomb threats</b>						
3.1	Responding to a bomb threat	x	x	x	x	x
3.2	Responding to a suspected bomb	x	x	x	x	x
3.3	Performance of explosive detection	x	x	x	x	x
3.4	Using of IEDD tactics			x	x	x
3.5	Performance of post-explosion work	x	x	x	x	x
<b>4. Countering of a munitions threat</b>						
4.1	Safe handling of ammunition and ordnances	x	x	x	x	x
4.2	Using of EOD-UXO tactics	x	x	x	x	x
4.3	Work in the minefield and cleaning of former battlefields and polygons	x	x	x	x	x
<b>5. Countering of the explosion threat</b>						
5.1	Countering of the threat from an explosive device			x	x	x
5.2	Countering of the threat from munitions	x	x	x	x	x
5.3	Countering of a CBRN threat arising from munitions			x	x	x

		EOD1 Technician Level 4	EOD2 Technician Level 4	EOD3 Technician Level 5	EOD4 Technician Level 5	EOD Technician- Instructor, Level 6
<b>Optional competencies</b>						
<b>6. Performance of underwater mine clearance EOD3</b>						
6.1	Underwater search of munitions and explosive devices			x	x	x
6.2	Detection of munitions and explosive devices			x	x	x
6.3	Raising to the surface of munitions and explosive devices			x	x	x
6.4	Underwater clearance of mines and explosive devices			x	x	x
<b>7. Performance of underwater mine clearance EOD4</b>						
7.1	Underwater search of munitions and explosive devices			x	x	x
7.2	Detection of munitions and explosive devices			x	x	x
7.3	Raising to the surface of munitions and explosive devices			x	x	x
7.4	Underwater clearance of mines and explosive devices			x	x	x
<b>8. Instructor of underwater mine clearance</b>						
8.1	Underwater search of munitions and explosive devices			x	x	x
8.2	Detection of munitions and explosive devices			x	x	x
8.3	Raising to the surface of munitions and explosive devices			x	x	x
8.4	Underwater clearance of mines and explosive devices			x	x	x
<b>9. Using an explosive detection dog EOD1</b>						
9.1	Breeding, care and keeping of an explosive detection dog	x	x	x	x	x
9.2	Coaching and training of an explosive detection dog	x	x	x	x	x
9.3	Working with a explosive detection dog	x	x	x	x	x
<b>10. Using of an explosive detection dog EOD3</b>						
10.1	Breeding, care and keeping of an explosive detection dog	x	x	x	x	x
10.2	Coaching and training of an explosive detection dog	x	x	x	x	x
10.3	Working with a explosive detection dog	x	x	x	x	x
<b>11. Instructor of using of an explosive detection dog</b>						
11.1	Breeding, care and keeping of an explosive detection dog	x	x	x	x	x
11.2	Coaching and training of an explosive detection dog	x	x	x	x	x
11.3	Working with a explosive detection dog	x	x	x	x	x
<b>12. Countering of a CBRN threat EOD2</b>						
12.1	Diving into the CBRN environment			x	x	x
12.2	Identification and countering of threats			x	x	x

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12.3	Contamination neutralization/removal			X	X	X
		<b>EOD1 Technician Level 4</b>	<b>EOD2 Technician Level 4</b>	<b>EOD3 Technician Level 5</b>	<b>EOD4 Technician Level 5</b>	<b>EOD Technician- Instructor, Level 6</b>
<b>13. Countering of a CBRN threat EOD3</b>						
13.1	Diving into the CBRN environment			X	X	X
13.2	Identification and countering of threats			X	X	X
13.3	Contamination neutralization/removal			X	X	X
<b>14. Countering of a CBRN threat EOD4</b>						
14.1	Diving into the CBRN environment			X	X	X
14.2	Identification and countering of threats			X	X	X
14.3	Contamination neutralization/removal			X	X	X
<b>15. Instructor of countering a CBRN threat</b>						
15.1	Diving into the CBRN environment			X	X	X
15.2	Identification and countering of threats			X	X	X
15.3	Contamination neutralization/removal			X	X	X