**Requirement Specification -**

**Foam Sleeping Pad**

1. **Requirements**

**1.1. Description of the requirement**

The Danish Defence has a need for Foam Sleeping Pads. The Foam Sleeping Pad is an essential part of the Danish Defence sleeping system providing insulation from the ground. The Foam Sleeping Pad also provides a level of comfort for the user.

The Foam Sleeping Pads will be used by men and women for both training and actual military operations. The Foam Sleeping Pad shall be durable, made from a suitable high quality closed cell crosslinked foam and have two grommets with elastic bands attached. The elastic bands are used to hold the pad when rolled up. The Foam Sleeping Pad shall have a matte earthly green or similar colour in order to provide some camouflage when placed on the ground in various terrains.

The Foam Sleeping Pad will primarily be used in the field, but also for e.g. shooting ranges and in urban environments. The Foam Sleeping Pad shall be able to maintain its properties when used by soldiers twice a week for at least one year. The Foam Sleeping Pad will be used directly on snow, wet forest floor, gravel, rocks, sand, concrete etc. The Foam Sleeping Pad will primarily be carried rolled or folded on the outside of a backpack or stored rolled inside vehicles.

**1.2. Description and definitions**

The requirement specification, cf. section 1.4, describes all the requirements for the acquisition and consists of six columns with the following information:

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| "#" | ID number |
| "Requirement" | Requirement description |
| "Classification" | The classification of the requirement as further described in section 1.3 |
| "DALO remarks" | Further information regarding the requirement |
| "Requirement compliance" | The tenderer's indication of compliance (YES or NO) |
| "Tender description" | Requirements regarding the tenderer's compliance description  |

**1.3. Classification**

The requirements are mandatory requirements (SHALL) and shall be fulfilled by the tenderer. If just one of the mandatory requirements is not fulfilled, the tenderer's offer will not be taken into further consideration.

**1.4. Requirement and response sheet**

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| **#** | **Requirement** | **Classification** | **DALO remarks** | **To be filled out by the tenderer** |
| **Requirement compliance****(tick a box)** | **Tenderer's description** |
| **YES** | **NO** |
| **1** | The Foam Sleeping Pad shall comply with Drawing 335498 | SHALL |  |  |  |  |
| **2** | The Foam Sleeping Pad shall be made of a closed cell cross-linked foam material with a density of 28 – 36 kg/m3. | SHALL |  |  |  |  |
| **3** | The foam shall have a tear strength of minimum 1650 N/m according to BS EN ISO 8067:2008 Method B or equivalent. | SHALL |  |  |  |  |
| **4** | The Foam Sleeping Pad shall have two durable grommets installed as pictured in Drawing 335498 and Drawing 339116. | SHALL | The grommets are used to reinforce the holes in order to avoid tearing. The reinforcement can be done with metal, plastic or another material that does not rust, tenderize or weakens during the lifetime of the sleeping pat. The reinforcement shall be in a colour not compromising camouflage for example not white or yellow. The grommets are marked “2” in Drawing 335498 and Drawing 339116.  |  |  |  |
| **5** | The Foam Sleeping Pad shall have a durable polyamide or polyester braided ø 4 – 5 mm elastic band with a length of 65 - 70 cm attached to each of the two grommets in accordance with Drawing 339116. | SHALL | The elastic band cannot be polypropylene braided, as it is DALO experience that it can cause discomfort to the user’s hands. The purpose of the elastic bands is to keep the mat rolled up. The length of the elastic band is understood as the raw length before the tying of knots and attachment to the sleeping pad. The Elastic bands are marked “1” in Drawing 335498 and Drawing 339116. The elastic bands shall have a lifetime of at least one year of use. |  |  |  |
| **6** | The Foam Sleeping Pad shall be a matte earthly green or similar camouflage colour. | SHALL | DALO does not consider black or dark grey a camouflage compatible colour. The sample does not have to comply with this requirement. |  |  |  |
| **7** | The Foam Sleeping Pad shall be permanently marked with the three letters FMI and the year of production.  | SHALL | It is up to the tenderer how to mark the product. The mark will ensure DALO that it is our product and not one bought in a shop. The placement and size of the mark is unimportant as long as it is visible upon inspection.The sample does not have to comply with this requirement. |  |  |  |
| **8** | The terms of delivery shall be INCOTERMS 2010 FCA. | SHALL | The sample shall not comply with this requirement. |  |  |  |
| **9** | The delivery date shall be within 120 calendar days from order placement. | SHALL | The sample shall not comply with this requirement. |  |  |  |
| **10** | The Foam Sleeping Pads shall be delivered suitably packed lying flat on pallets no higher than 120 cm. | SHALL | It can be EUR-pallets or over-size pallets. This requirement overrules any phrase stating otherwise in DALO terms and conditions for trade with liquidated damages, section 6.1 Packaging.The sample does not have to comply with this requirement. |  |  |  |
| **11**  | A sample of the offered Foam Sleeping Pad must be submitted to DALO before the deadline for submission. | SHALL | The sample must be identical to the offered sleeping mat in terms of quality, foam type, size, grommets and elastic bands. |  |  |  |
| **12** | The offer shall include a specification sheet describing the offered foam including * Foam material, e.g. EVA, PE or other.
* Nominel Density according to BS ISO 7214: 2012 [kg/m3] or equivalent.
* Tear strength according to BS EN ISO 8067:2008 Method B [N/m] or equivalent.
* Compression Stress-Strain according to BS ISO 7214 1998, for both 10% and 25%, [kPa] or equivalent.
* Compression Set according to BS ISO 7214 1998: 25%, 0,5hr and 24hr recovery [% set] or equivalent.
* Maximum recommended operating temperature.
 | SHALL |  |  |  |  |
| **13** | The Foam Sleeping Pad shall function well.  | SHALL | It is critical to DALO that the Foam Sleeping Pads will function well and without complications during operative tasks. To ensure an acceptable level of functionality DALO will test the Foam Sleeping Pads functionality. Factors such as friction with sleeping bags (the bag should not glide off the pad) and ease of use of the attached elastic bands (elasticity, length and material choice), experienced comfort and other practical and tactical factors influence the functionality. A test performed by DALO will determine if the Foam Sleeping Pad meets the requirement. Please see section 1.5 Evaluation for further details. |  |  |
| **14** | The Foam Sleeping Pads shall be suitable for military use for minimum one year. | SHALL | It is critical to DALO that the sleeping pads are able to withstand the severe wear and tear that is expected from daily use in operative tasks. To ensure an acceptable level of durability DALO will assess the quality and durability of the Foam Sleeping Pad. DALO only accept offers that fulfils this requirement. Factors such as the grommet’s ability to withstand pull, the foam´s ability to regain shape and volume after pull and compression and the ability to withstand wear and tear when used on different surfaces such as concrete, gravel or rocks influence the result. A test performed by DALO will determine if the Foam Sleeping Pad meets the requirement. Please see section 1.5 Evaluation for further details.  |  |  |
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**1.5. Evaluation**DALO will test and evaluate the offered Foam Sleeping Pad according to requirement 13 and 14. The evaluation is a pass/not pass process to secure that the winning Foam Sleeping Pad meets DALO expectations regarding functionality and durability. The evaluation will be carried out by a Subject Matter Expert (SME) panel as a combination of a desk examination and a field test. The SME panel will grade the sleeping pads on the 1 – 5 general scale below. The sleeping pads must obtain more than 3 in average for each requirement in order to pass. The evaluation includes but is not limited to actions such as pulling and compressing the foam and elastic bands, dragging the sleeping pads with weight on top over different surfaces, lying on the pads on different surfaces and testing friction with sleeping bags.

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| Grade  | Meaning |
| 5  | Excellent performance |
| 4  | Good performance |
| 3  | Average performance  |
| 2  | Low Performance |
| 1  | Very low or no performance |

Descriptions of the grades are general indications and apply to the requirements as appropriate. Grades may be given as decimal numbers in cases where the performance is assessed to fall between two of the grades.