

[Annex A: Technical Specification](#)

INVITATION TO BID: No. UNHCR/SUP/MENA/ITB/2023/063 FOR THE ESTABLISHMENT OF FRAME AGREEMENT(S) FOR THE SUPPLY OF POLYURETHANE FOAM MATTRESSES

UNHCR Environmentally Friendly Procurement

MATTRESSES

Providing material assistance to forcibly displaced populations is fundamental to UNHCR's protection mandate. In an emergency, mattresses are one of the main essential items that UNHCR distributes as part of the assistance to the affected populations. The mattress is used for sleeping. UNHCR may procure an average of circa 1.3 million mattresses annually.

END USERS

UNHCR is mandated to protect and assist refugees, forcibly displaced communities, and stateless people. The product with this specification will be used by the people we protect, primarily in emergencies. The end users include people of all ages ranging from infants to older persons, persons with disabilities, and pregnant women. Therefore, the supplier needs to understand and study the needs of a forcibly displaced population, especially in emergencies, to ensure an innovative and sustainable product design that is user-centered.

SUSTAINABLE SUPPLY CHAIN

For UNHCR to fulfill its mandate, it is imperative to minimize the environmental footprint of humanitarian assistance. Our approach to a sustainable end-to-end supply chain includes planning, sourcing, material, manufacturing processes, procurement, delivery, and lifecycle management of goods. A holistic assessment of sustainable products includes but is not limited to, the following criteria:

- The product design follows Universal Design principles that are user-friendly and accessible¹.
- Manufacturing processes take into consideration the protection of the environment and respect for social standards².
- Products are made from sustainable materials.
- Packaging is made from sustainable material, ideally with a second-life purpose.
- All unnecessary single-use plastic is removed³.
- Packaging, palletizing, and load ability of transport units are optimized.
- Products are recyclable.
- A life cycle analysis, including GHG emission factors, is performed for all products.
- The geographical distribution of the supplier base is diversified to ensure the proximity of product delivery.

PREFERENCE

Preference will be given to a product that is most user-friendly and has the highest overall sustainability elements that satisfy technical specifications.

¹ <https://universaldesign.ie/what-is-universal-design/the-7-principles/>

² Suppliers to demonstrate the application of ISO 14001:2015: Environmental managing systems, ISO 9001:2015: Quality Management systems, ISO 26000: Guidance on social responsibility by submitting the relevant certificates, if available.

³ <https://www.unep.org/resources/report/single-use-plastics-roadmap-sustainability>

Technical Specification for the mattress

Characteristic	Value
General design requirements	The mattress is used for sleeping on and consists of one-piece polyurethane (PU) foam and a textile cover with a zipper or Velcro. It must be non-toxic for humans, breathable, secure free from allergens, and have no bad smell.
Material(s)	<u>Polyurethane (PU) foam</u> is produced of polyol and isocyanate. Polyol can be virgin or recycled from old PU mattresses. Mattresses shall be produced from a mixture of virgin and recycled polyol with a target minimum of recycled polyol of 15%. <u>The non-abrasive textile cover</u> shall be made of virgin and recycled fibers (for example, cotton).
The density of PU foam	Minimum 21 kg/m ³ (±5%)
Size	Length: 1900 mm (±5%) Width: 800 mm (±5%) Thickness: 100-150 mm (±5%)
Indentation Load Deflection (ILD)	Minimum 16 kg
SAG factor	Minimum 2
Air flow	Maximum 0.11 m ³ /min
Impact resilience	More than 30%
Colour	<u>Colour of the foam</u> : homogeneous light colour (grey, yellow, milky, white, etc.) <u>Colour of the textile cover</u> : dark uniform colour (dark blue, grey, brown, etc.). Black, white, red, and military colours are not accepted
Sewing	<u>Head side</u> : external sewing on the width minimum of one line. <u>Length side and width side</u> : internal sewing using stitching minimum 3 lines.
Microbiology	No bacteria/fungi/yeast in the foam and in/on the textile cover
Certificates	<u>A copy of national and/or internationally recognized quality certificate of the manufacturing company must be provided.</u> A certificate/laboratory test result showing compliance with the specified technical requirements should also be provided.
Shelf life	Minimum 2 years
Lifespan	Minimum 5 years
Warranty	Warranty against the manufacturing defects (minimum 1 year from the date of receipt)

Estimated scenario - total annual quantities/operation

Operation	Lot #	Estimated annual total quantities
Iraq	1	50,000 – 60,000
Jordan	2	80,000 – 100,000
Lebanon	3	100,000 – 110,000
Syria	4	500,000 – 600,000
Türkiye for MENA	5	50,000 – 60,000
Yemen	6	330,000
Libya	7	14,000 – 15,000

Packaging

Primary packaging	Reducing plastic waste in the environment. Avoid primary packaging and unnecessary sub-packaging, especially single-use plastic foils or bags.
Secondary packaging	- Mattresses can be packed in a vacuum bag and compressed to a minimum of 75% rate and sealed.

	<p>It is recommended to put 3-5 mattresses per bag. The exact number of mattresses per bag will be defined in a PO. Recovery of the mattresses after the opening of the bag should be a minimum of 96% after 24 h. The vacuum bag should preferably contain recycled plastic.</p> <p>If bidder has innovative packaging that does not harm the product, ideally with a second-life purpose, and minimizes packaging waste, that should be submitted.</p> <p>- All the plastic packaging materials (if any) must contain a proper recycling code to specify the type of plastic used. Use recycling codes as per ASTM International Resin Identification Coding System (RIC)"⁴</p>
Tertiary packaging	Secondary packaging might be packed (if necessary) on a pallet. Innovative sustainable solutions for pallets are welcomed.

Optimal Shipping / Container Information

In preparing shipping, the maximum number of items that can fit into a transport unit must be considered. The container layout plan will be defined on the purchase order.

20' DC container (with pallets)

40' DC container (with pallets)

40' HC container (with pallets)

The final number of the transport unit and maximum height of the loaded pallet, if palletized, will be defined on the PO.

Manufactured marking

Every product should include a tag stitched on the hem of a mattress. The tag should contain the following data:

- UNHCR Logo
- manufacturer's name
- unique reference batch number
- date of manufacturing
- material composition (type of material(s)) and the ratio of each material in the product
- certified sustainability claim/eco-labeling
- information related to the reuse/recyclability of the item
- QR code
- washing instructions for the textile cover

No company logo should be included with the manufacturer's marking. A sustainability claim can be added, but it must be proven accurate. **Final marking on the tag, letter size, and design require approval from UNHCR before production. See Appendix 1-reference of a graphic example.**

Marking on the secondary packaging

UNHCR logo + Mattresses (dimension: 1.9 x 0.8m), number of pieces + PO number. No logo of the supplier is allowed. The marking must remain readable and well-fixed on the secondary packaging.

Marking techniques

- Printing on sticky tapes
- No harmful ink/coloring should be used

⁴ https://www.astm.org/d7611_d7611m-21.html

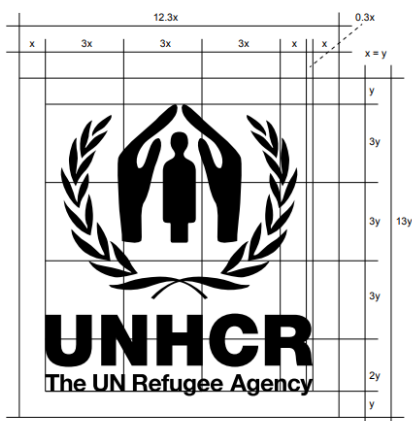
Graphic Reference:

The marking on each package must remain readable and securely affixed. Other markings as specified in the contract/purchase order. The UNHCR visibility logo should be applied to all sides of the secondary packaging (excluding the bottom) in A4-size page. The following information should be included in the shipping marking:

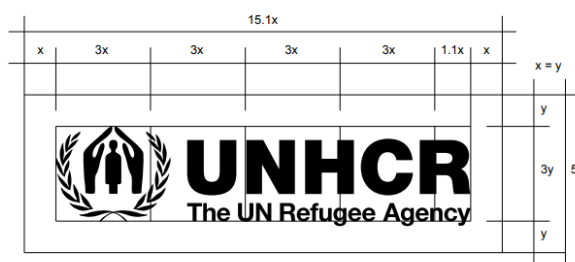
- UNHCR LOGO
- UNHCR Item Name and Item Number:
- PO No.:
- PO Quantity:
- Consignor (Supplier & Manufacturer):
- Consignee:
- Country of Origin:
- Destination:
- Packing Units: Marked with consecutive numbers shown over the total number of packing units, i.e.
 - 1/5, 2/5, etc.
- Batch Number and Production Date:

No company logo should be included with the manufacturer's marking. The final marking on the tag, letter size, and design needs to be approved by the UNHCR before production. See Appendix 2- reference of a graphic example for marking secondary packaging.

UNHCR Logo Application Reference

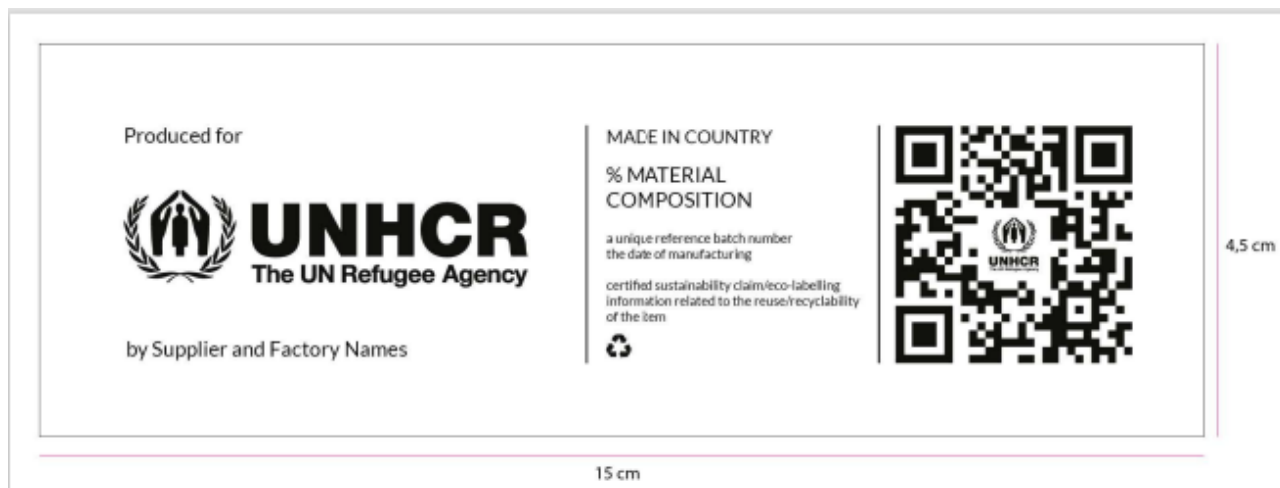


UNHCR Vertical Visibility logo



UNHCR Horizontal Visibility logo

Appendix 1 – Label mattresses





UNHCR

The UN Refugee Agency

See section “Shipping Markings” on the relevant GDS PO.

