

UNICEF Target Product Profile

UNICEF Kit Box- *a container for emergency education, ECD and recreational kits*

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Purpose of the UNICEF Target Product Profile (TPP)

UNICEF creates Target Product Profiles (TPPs) to communicate requirements for products which are currently not available on the market or available but not tested in the UNICEF context yet, and that can fulfil a priority need to be used in the unique context in which UNICEF and its partners operate. TPPs include information on how the new product will be used, by or for whom, and the minimum and ideal performance criteria. The purpose of TPPs is to guide industry to develop products that meet UNICEF's needs; however they do not act as the final procurement specifications but rather as a list of desired requirements that combined describes the ideal product considering the context. UNICEF recognizes that innovation is an iterative process, and that suppliers must balance sometimes competing requirements against product development progress. To allow for creativity, and the innovation process to take its course, TPPs are less prescriptive than procurement specifications, and can therefore be challenged by the industry. For more information, please visit our [TPP page](#).

UNICEF Kit Box

UNICEF's emergency kits are vital tools in delivering life-saving aid to children and families affected by natural disasters, conflicts, and other humanitarian crises. These kits contain essential supplies such as medical materials, hygiene items, educational tools, and nutritional supplements, designed to meet the immediate needs of vulnerable populations.

This Target Product Profile (TPP) outlines the critical specifications and performance requirements for the UNICEF Kit Box, a container for emergency education, ECD and recreational kits. The kit box securely stores and transports essential supplies in various emergency settings, ensuring durability, portability, and environmental sustainability. The table accompanying this introduction details both the acceptable and ideal performance criteria for the kit box, including factors such as price, weight, materials, structural integrity, and special features like lock mechanisms, stackability, and ergonomic design. Key considerations focus on ensuring that the box is lightweight, durable, and made from partially or fully recycled materials, while being capable of enduring harsh environments and maintaining its functionality during transport and storage. This TPP serves as a comprehensive guide for manufacturers to meet UNICEF's needs in providing reliable and efficient storage solutions for education, ECD and recreational kits during emergency response operations.

If you can provide a product that corresponds to this Target Product Profile, please contact UNICEF at innovateforchildren@unicef.org.

UNICEF Kit Box - Target Product Profile		
Price requirements		
Attribute	Acceptable Performance	Ideal Performance
Unit price of the box (empty)	The unit price of the empty box is less than 100 USD	The unit price of the empty box is less than 50 USD.
Dimensions		
Attribute	Acceptable Performance	Ideal Performance
External dimensions	Open, as long as the volume & inner capacity are met.	
Internal dimensions	Open, as long as the volume & inner capacity are met.	
Inner capacity	95.63 ltr	
Volume	0.12 cbm	
Weight of the box	The empty box weighs less than 6.67 kg. Weight pr. gsm: 2700 GSM	The box weighs as little as possible, with no lower limit.
Structural requirements		
Attribute	Acceptable Performance	Ideal Performance
Load Bearing		320 – 480 kgs
Structural support	The base of the box is to be made with two additional ribs (V-shape) to ensure the lateral stability and minimize sag (if any) due to 50 kg load. The minimum depth of two bending (ribs) will be 5mm (+0/-1) and will not have an equal depth as of surrounding profile and be located longitudinally (parallel with the longest sides of the box). The depth of surrounding profile should be 12 mm (+-1) while the difference between the surrounding profile depth and 2 bending ribs should be 3-5mm to absorb the sag (if any). The ribs should be V-shape and base width should be kept in accordance with agreed height i.e. 5mm (+0/-1) to achieve maximum lateral stability.	An alternative design with lighter weight and less material requirement to ensure lateral stability and minimize sag (if any) due to the 50 kg load.
Lifting requirement	The lid and lock supports should be sufficiently robust to ensure that the box, when fully loaded with the kit components (up to 50 kg), can be lifted from the top of the lid using a suction arm.	

Locking mechanism robustness	The locking mechanism should be strong enough to ensure the box remains locked in place and does not open when it is lifted by a robotic suction arm or by any machine/or force of the same type. A strong hinge facing downward is required to avoid metal box opening during the automated packing process.	
Material requirements		
Attribute	Acceptable Performance	Ideal Performance
Material of the box	Box is made of a light-weight, durable and partially recycled (30% minimum) material, such as aluminum or plastic. Material should not be shiny.	Box is made of a light-weight, durable, 100% recycled material with minimized production carbon footprint. Material should not be shiny.
Tensile Strength of the material	Rm MPa 110-120.	> Rm Mpa 110-120.
Surface type requirement	The box needs to have a non-wetting surface that is easy to clean and that resists attack. The material needs to withstand incredible abuse and extremely harsh environments without chipping, denting, or losing their finish. The box needs to be waterproof.	
Design requirements		
Attribute	Acceptable Performance	Ideal Performance
Box assembly	The box needs to be foldable (preferably) and/or fragmentable to allow compact stacking and shipping when empty, and quick to assemble.	
Stackability	When empty/not assembled: 3 x 384 boxes should fit into a standard container. The height should be lower than 1/3 of the box height when assembled. When assembled: 384 boxes should fit into a standard container. Width x depth is ½-euro pallet size; height will allow for stacking the boxes 8-high inside a container. The lid of the box must incorporate an interlocking feature to prevent the boxes slipping when stacked on top of one another	
Handles	Ergonomic spring handles to be located on the two shorter/and opposite sides of the box. The handle should be very robust and able to sustain the load up to a minimum of50 kg (+/-5). The handle should be spring controlled, after use should move back to its original position slowly and shall not hit the box with force.	Ergonomic and detachable handles to be located on the two shorter/and opposite sides of the box. The handle should be very robust and able to sustain the load up to a minimum of 50 kg (+/-5). The handle should feel comfortable in the hand, and made from material that does not scratch or irritate the skin during longer transport. An additional extendable handle could be placed on the short side of the box that is opposite to the wheel attachment points.
Box Cover	The box cover needs to stay open securely while people access the contents inside. A solution to keep the cover open, e.g. 2 Straps or other types of supports to keep the cover at a 105- degree angle without additional support.	
Wheel attachment point		The box has a mechanism to attach two (or four) detachable wheels on one of the shorter sides of the box. When wheels are not attached, the wheel attachment point should be covered to prevent dust, water or other material getting into it.

Outer design	The outer surface of the box can be customized with programmatically relevant non-wetting prints or stickers that will endure in extremely harsh environments without chipping, denting or losing their finish, and allow the box to have alternative or secondary uses for education or playing purposes after the content of the box has been used. The secondary use should not present any risk or danger to children.	
Box shape	The box should have all four sides level to prevent sliding on a conveyor belt. If there is any buckling of the base, the height of any corner MUST NOT EXCEED 0.5 CM when placed on a flat surface.	
The locking mechanism	The locking mechanism should not get released or unlocked unless and otherwise certain amount of force (minimum force of 7 kg) is applied by the user to pull up the handle and get over the cam.	The locking mechanisms should not get released or unlocked unintentionally. The release of the lock should not cause danger for children opening and using the box.
Accessories		
Attribute	Acceptable Performance	Ideal Performance
Locking mechanisms	Two sets of 2 locks should be secured inside the box. Locks are fixed inside the cover of the box.	
Wheels	2 detachable wheels with attachment mechanisms should be provided and secured inside the box. The diameter of the wheels should be at least 15 cm. Wheel should have a deep tread pattern to offer better traction in muddy conditions. The wheels should be able to carry a load of 50 kg, easy to clean from dust and dirt, and endure in harsh environments without breaking.	