

An aerial photograph of a coral reef. The water is a vibrant turquoise color, with darker patches of coral visible beneath the surface. A small, white boat is visible in the lower-left quadrant of the image. The overall scene is a natural, underwater landscape.

ALPINTER

**ENVIRONMENTAL
IMPACT
INITIATIVE
2022**



INTRODUCTION

01 INTRODUCTION

WE ARE ALPINTER

For more than 30 years, Alpinter has been a trusted supplier and partner for dozens of NGO's and organisations.

Alpinter exist to create the best shelter and core relief solutions that serve our clients and beneficiaries in emergency situations around the world.

OUR MISSION

We want to:

- **Supply** our clients with the **best shelter solution in any crisis situation**
- Be a **trusted developer** of tents and related relief items for the **humanitarian sector**
- **Constantly innovate** to **improve** our products and services on **functionality, performance, durability** and **sustainability**
- **Anticipate the need** for shelter and core relief items in emergency situations, by **optimising our global strategic stocks**



GUIDING PRINCIPLES

We recognise that our activities will have an environmental impact.

Therefore we organise our everyday business according to **4 BASIC ENVIRONMENTAL PRINCIPLES**, which guide our efforts to minimise the impact of our activities on the environment:

- **CONSCIOUS MATERIAL CHOICES**

We carefully select and choose the materials we work with, taking into account client specifications, real-world performance, durability and eco-friendliness.

- **LOGISTICS OPTIMISATION**

We optimise our products, their packing and our logistics solutions to ship and transport the products as efficiently and eco-consciously as possible.

- **WASTE ELIMINATION AND SECOND LIFE**

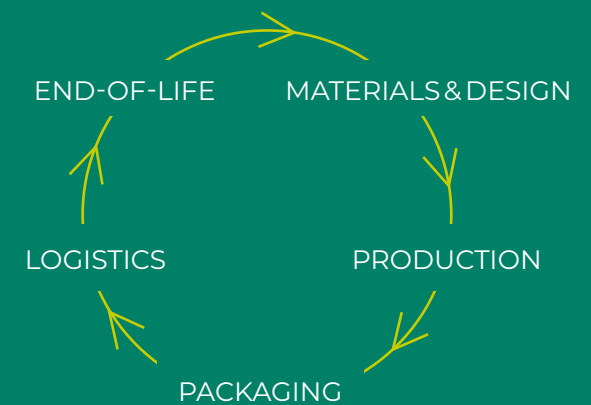
In all aspects of production, we integrate processes that allow us to optimise our production and eliminate as much waste material as possible. We consciously design our products and packaging wherever possible to encourage their re-use (i.e. give a second life) once they have served their initial purpose.

- **CONSCIOUS USE OF NATURAL RESOURCES**

In all activities, we consciously manage the use of natural resources. From innovative industrial production processes and avoiding unnecessary product dying all the way to policies for switching off lights and heating at HQ when not required.



Alpinter actively undertakes actions to apply these 4 basic environmental principles throughout the entire product life cycle.



While proud of the steps taken so far, we acknowledge the need for people and nature to continue these efforts on every level.

**To make a difference
whenever we can.**



OUR CURRENT IMPACT

02 OUR CURRENT IMPACT

Our Alpinter product portfolio consists of tents and other non-food core relief items, developed by Alpinter in collaboration with our clients and produced according to the strict specifications of the procuring organisations.

Over the years, we have actively worked on the development of products that, after their initial usage can be re-used for other purposes, can be recycled and when eventually thrown away produce as little waste material as possible.

Starting 2021, we launched our own labelling system, indicating functionalities of second life uses and waste management. This way, we try to actively promote alternative usages whenever we can.



REUSABLE



RECYCLABLE



WASTE MINIMISATION



LONG LIFESPAN

2.1 MATERIALS & DESIGN



Tarpaulins are made of PE or FR-Treated PE. Non FR-treated PE is a recyclable material, where proper recycling facilities exist. PE is a highly adaptable material suited to a multitude of 'second life' uses or redeployments.



Jerrycans are made of standard LDPE, which is a recyclable material, where proper recycling facilities exist. It is also a highly adaptable material suited to a multitude of 'second life' uses or redeployments.



All three tents are made of FR-treated PE with steel or aluminium frames. Steel and aluminium are recyclable materials. PE can be easily cut into sections and repurposed for a wide variety of uses. The Xpert High Performance Tent has been created as the new generation of Multipurpose Tents, combining additional functionality and a longer lifespan.



BLUE GEODESIC FAMILY TENT

The BLUE (Geodesic) Family Tent is made from PE material with an aluminium frame. Both the aluminum frame and PE tent material are recyclable. The entire tent design, homologated in 2019, focused on improving the lifespan and performance of the family tent compared to the previous polycotton model, avoiding the use of bromide-based chemical treatment through the use of naturally slow flame spread PE.



RED FAMILY TENT

The RED family tent is made of PE with a hybrid metal and fibreglass frame. Both the metal frame and PE tent material are recyclable, while the fibreglass elements are extremely resistant to corrosion.



GENERAL: CURRENT GENERATION OF FAMILY TENTS AND MULTIPURPOSE TENTS

Previous generations of Family and Multipurpose Tents were made from polycotton (PC), a mixture of synthetic and natural fibres which is difficult to recycle. Most international organisations have made the transition to shelters made from 100% polyethylene (PE), an entirely synthetic fabric which is longer lasting, easier to recycle, and naturally slow flame spread without toxic chemical treatments.



2.2 PRODUCTION

Alpinter products are produced in own and partner production facilities. Our major production sites are **ISO 14001 certified**, the international standard for Environmental Management Systems.



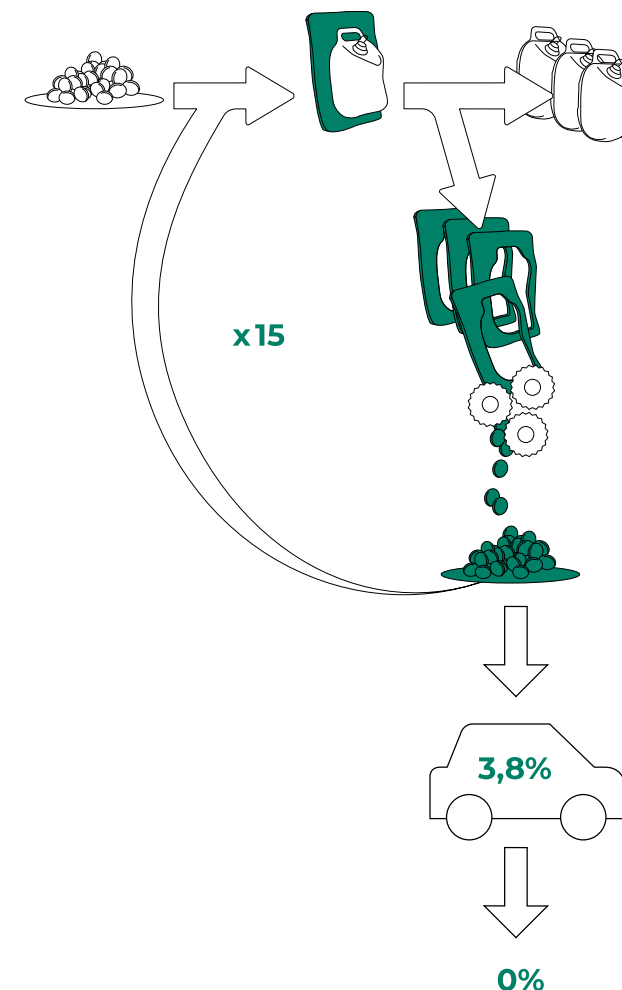
PLASTIC SHEETING
BLUE GEODESIC FAMILY TENT
RED FAMILY TENT

Production offcuts of PE material are repurposed to fabricate the bales in which the tents are packaged, avoiding the need to manufacture separate packaging, and minimising the waste material generated during the production process.



ZERO WASTE PRODUCTION OF JERRY CANS

Alpinter has its own **jerrycan production facility in the UAE**. We have calibrated the production process to **vastly minimise raw material waste** in our production process. Since production began in 2018, we have installed a process in which waste material is re-integrated in the production for up to 15 times, achieving a final raw material wastage figure of only 3,8%. That remaining 3,8% waste material is on-sold to a company producing dashboards for cars, thus our jerrycan facility is practically a **0 waste production unit**.



2.3 PACKAGING

Packaging can be considered at three distinct levels. On each level, we investigate the need of the packaging and have been able to make significant inroads into waste minimisation and limitation of the single-use-plastics.

PRIMARY PACKAGING	SECONDARY PACKAGING	TERTIARY PACKAGING
Primary packaging are the packing components in direct contact with the product at the smallest unit of distribution, for example a PE bag containing a single product inside a Shelter Tool Kit.	Secondary packaging contains multiple primary packed products together, for example a crate containing 6 bags of grain.	Tertiary packaging is the freight and logistics packaging used to facilitate shipping and storage, for example a stretch-wrapped pallet of goods.



JERRY CANS

We have completely eliminated single use plastic from our jerry can packaging. Previously, the jerry cans were packed 25 units in a LDPE bag before being packed into cardboard boxes. We ran internal tests at our manufacturing facility in the UAE and noticed that removing the LDPE bags had no impact on the ingress of dust or other contaminants into the boxes. We found that good quality cardboard boxes provided more than sufficient protection by themselves.



KITCHEN SETS

We have removed all single use plastics inside our Kitchen Sets. Kitchen Set components used to be packed in individual PE bags, however after extensive testing and customer feedback we found that good quality carton boxes sufficiently protect the kitchen set components from dust, even after protracted storage.



HOWEVER, THESE VENTURES DO NOT ALWAYS RESULT IN THE COMPLETE REMOVAL OF SINGLE USE PLASTICS. WE PERFORMED TESTING WITH SHELTER TOOLS KITS, AND FOUND THAT THE LDPE PACKAGING WAS IMPORTANT TO PROTECT THE ENCLOSED TOOLS FROM RUST, ESPECIALLY IN HUMID ENVIRONMENTS.

2.4 LOGISTICS (TERTIARY PACKAGING)



PALLETISATION

Alpinter developed the CRI Pallet, an adapted Europallet designed to optimise container loading rates. Utilising pallets with 75 x 117cm dimensions (rather than the traditional 80 x 120), the loading rates inside 20" and 40" shipping containers can be increased by up to 25%. For example, 2496 Kitchen Sets (Type B) can be loaded per 40" container on regular pallets, while CRI pallets improve the loading rate to 3120. Already homologated by the major international humanitarian organisations, CRI pallets increase shipping efficiency, and minimise the carbon footprint of shipping relief items by sea freight.

Alpinter developed the Metal Stackable Pallet for heavy or bulky items such as Family Tents, Winterization Kits and Shelter Tool Kits. These pallets offer the dual advantages of having container-optimised footprints, and facilitating easy handling and stacking.



ACCESSORIES FOR FAMILY TENTS MULTIPURPOSE TENTS

Tent accessories (pegs, hammer, repair kit) are packaged in bags made from tent fabric off cuts, to minimise wastage during the manufacturing process.



2.5 END OF LIFE

WOODEN TENT BOXES

The Unicef Standard High Performance Tents are packed in newly designed wooden boxes, with improved hinges for easily opening and closing the box, and therefore broadening the possibilities for reutilising the packaging.

We highly encourage and have seen in the field the boxes being reused as benches, shelves and cots.

PLASTIC SHEETING

By its very nature, humanitarian-specification plastic sheeting is suited to diverse applications and redeployment: for example, they are frequently deployed as emergency shelters, fences, latrines, floor covers, fumigation sheets. Manufactured as a hard-wearing, high quality item, UNHCR/ICRC tarpaulins such as those manufactured by Alpinter can be used and reused for several years.





PROJECTS 2022 2025



AMBITION AND LIMITATIONS

Both with us and with our client and partner organisations, we understand that implementing changes to products and logistics is a challenge.

Changing requires the **acceptance of partner organisations** at global and local levels who always operate **within the cost and production realities** of both a competitive world and the humanitarian context.

At **Alpinter**, we have taken the decision to incorporate sustainability in our company DNA.

We will **remain at the forefront of pioneering solutions for minimising our environmental impact across the entire product life cycle**.

The following pages highlight a couple of past and ongoing projects, which can guide the humanitarian sector today to make better choices in product and logistics, without having to compromise on functionality or performance.

AVOIDING CHEMICALS

Taking into account various requirements for tents in humanitarian contexts (resistant to fungi, fire safe, waterproofed, ...) Alpinter was the first company to introduce a synthetic material, Polyethylene or PE as main tent fabric.

When it comes to sustainable material choices, plastics are often considered as to be avoided materials. However taking into account the requirements of shelter solutions in a humanitarian context, PE is a better and more sustainable alternative: it is **inherently slow flame spread** and does **not require additional chemicals treatments** for fungi or waterproofing.

NO DYING = SAVING WATER

Fabric treatments and dying require significant amounts of water. For our **humanitarian blankets**, Alpinter was the first supplier to introduce **polyester fleece blankets** replacing the traditional wool blankets. The grey colour of these blankets comes only from a mixture of black and white yarn. There is **no coloration involved**, meaning **no useless water consumption** during production.



SMALL STEPS, BIG IMPACT



Together with Shelterbox, one of our clients and partner organisations, we conducted a full portfolio analysis to investigate where single use plastics can be removed.

While the project is still ongoing, we already can see today the impact of impact of large amounts of unnecessary plastics we have been able to avoid.





1 YEAR IMPACT

KITCHEN SETS

	30.000	SHIPPED PER YEAR
	15	PLASTIC WRAPS REMOVED PER SET
	450.000	PIECES OF SINGLE USE PLASTICS REMOVED





JERRY CANS

	500.000	SHIPPED PER YEAR
	4	PLASTIC BAGS REMOVED PER BOX
	200.000	PIECES OF SINGLE USE PLASTICS REMOVED




SHELTER TOOL KIT

	40.000	SHIPPED PER YEAR
	7	PLASTIC BAGS REMOVED PER KIT
	5.714	PIECES OF SINGLE USE PLASTICS REMOVED



SMALL ITEMS (ROPES, JUGS, WASH BASINS)

	12.000	SHIPPED PER YEAR
	10.500	PIECES OF SINGLE USE PLASTICS REMOVED



**IN 2021,
WE AVOIDED
2131 KG OF
UNNECESSARY
SINGLE USE
PLASTICS TO
BE PRODUCED
AND USED ON
OUR PRODUCTS**



BLANKETS (HIGH THERMAL POLYFILL, MEDIUM AND LOW THERMAL, UNHCR/ICRC/IFRC)

Presently, 4 or 5 blankets are packed inside the bales in a single use LDPE bag. We are investigating the possibility to remove single use plastic inside the bales. As the blankets are already protected by watertight plastic film and a jute woven bag, we see that the additional single use plastic bag may be superfluous.

We are also investigating the potential for Alpinter Blankets to have a second life, potentially as insulation within wall cavities. We are presently exploring techniques for shredding & sealing blankets for this purpose.





HYGIENE KITS

Hygiene kits are inherently tied to the dignity and cultural norms of the beneficiaries, which at times limits the implementation of eco-friendly alternatives. For example, we have supplied reusable menstrual pads with kits destined for southern and central Africa, however these are not yet well accepted in other areas of the world, where disposable products are preferred.

Nonetheless, we are looking at several initiatives:



Shipping Hygiene Kits in a bucket, rather than a cardboard box, **eliminating the need for external packaging**. We are discussing this option with stakeholders, as this also has an impact on the overall cost of acquisition, as well as the potential loading rate for hygiene kits and therefore the carbon emissions generated during their transport.



We are continuing research into **alternative packaging** for hygiene kit components, for example paper packaging for soap bars instead of plastic, and biodegradable plastic for bottles.



We are investigating innovative new ways of packing and presenting hygiene items, for example providing shampoo in a long lasting solid bar. This innovation would eliminate the requirement for plastic packaging and minimises the physical dimensions of the kit (and therefore the carbon footprint generated during transport).



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BLUE GEODESIC FAMILY TENT RED FAMILY TENTS

While the composition of Family Tents is largely defined by the contracting organisations (UNHCR, IOM, ICRC), we are still looking for innovations to minimise the environmental impact of these products. For example, we are investigating the potential to add zips or another fastening mechanism to our PE tent bales (BLUE / RED), to facilitate their second life as a bag or rucksack.



XPERT HIGH PERFORMANCE TENT HUB MULTIPURPOSE TENT

During the development of the XPERT High Performance Tent we paid special attention to the external packaging design, to minimise the shipping dimensions while facilitating easy repacking and redeployment of the shelters - encouraging a longer lifespan and second use.

These optimisations were so successful that Alpinter is now investigating the possibility to implement the same type of box hinges and design principles to the packaging of the HUB Multipurpose Tent, which continues to be deployed in large volumes around the world.





CLOSED LOOP IPROJECT

04 CLOSED LOOP PROJECT

Together with production partner Nizam, Alpinter has engaged in a large scale sustainability projects, lead by Closed Loop Projects with support of the German Government.

The goal of the project is to increase knowledge and awareness about more sustainable solutions and circular economy around production of humanitarian blankets in Pakistan. Within the research projects, we will also look into resource efficiency, optimised carbon emission and waste- and supply chain management.



CLOSED LOOP
F A S H I O N



THE FUTURE

05

THE FUTURE

The humanitarian world tends to follow the product specifications set by the major international organisations: UNHCR, UNICEF, ICRC etc. If substantial changes to product designs or materials are to be implemented, it will require the collaboration of these organisations together with designers and manufacturers such as Alpinter, to implement material and design changes that further minimise the environment impact of production and use, while respecting the practicalities of industrial manufacturing processes, a competitive procurement environment, and distribution into remote areas.

We envisage future collaborations with the abovementioned organisations to explore and implement more initiatives including bioplastics, recycled materials and other eco-friendly alternatives, designs with enhanced second life potential, future innovations in products and packaging for more efficient logistics, etc.

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