

1 Jan 2023

“SHELLMET” AN ECO-FRIENDLY SOLUTION TO MARINE WASTE

*TBWA\HAKUHODO HELPS RECYCLE 40K TONE OF MARINE WASTE
FROM ONE OF JAPAN'S LARGEST SCALLOP LANDINGS*

TBWA\HAKUHODO and its partner Koushi Chemical Industry Co. announced the launch of “SHELLMET,” an environment friendly helmet made from wasted scallop shells, in Sarufutsu Village, Hokkaido.



■ WHY A SHELLMET?

Shells that have protected themselves from external enemies, are now protecting people and the planet.

In 2021 the export of scallop shells ceased causing concern for Soya district, where Sarufutsu Village is located, due to the area generating approximately 40,000 tons of shells as marine waste annually. The environmental impact on storing the scallops on the ground is hazardous and could lead to serious soil contamination, creating a social issue for the local community.

To help solve the issue of surplus scallop shells, TBWA\HAKUHODO's discovery that scallop shells main component is calcium carbonate and could be reused as a raw material for a completely new material. The TBWA\HAKUHODO team began efforts to recycle the material, which would become an important resource to support the village.

※Fisheries Promotion Division, Fisheries Bureau, Hokkaido Department of Fisheries and Forestry, "Survey of Fisheries Waste Generation in FY2021".



Wasted scallop shells piled up in Sarufutsu Village (photo taken in August 2022)



The role of a shell is to protect itself from outside enemies. With scallop fishing being dangerous, the idea for the "SHELLMET" - a helmet made from scallops to protect scallop fishermen – was born.

The opportunity to scale the Shellmet to become more than a protective wear for the fisherman was obvious. In recent years, Hokkaido has been hit by major earthquakes, and the risk of disasters such as heavy rain

and snow damage due to abnormal weather has been increasing. From this discovery, the team decided to commercialize the product for use by villagers as disaster prevention helmets to protect themselves.

■ Inventing the new material from wasted scallop shells and waste plastic

Scallop Shells x Waste Plastic: Japan's first new material "*Shellstic*", upcycled from waste

SHELLMET is made from a new material based on scallop shells whose main component is calcium carbonate, and recycled plastic. It was developed by Koshi Chemical Industry Co. with Professor Hiroshi Uyama of Osaka University with support from Sarufutsu Village in providing surplus shells.

TBWA\HAKUHODO developed the name of "Shellstic (Combination of words "Shell" and "plastic")" and logo for the new recycled material which is a combination of wasted scallop shells and waste plastic.



Characteristics of "*Shellstic*"

- Contributes to a maximum 36% reduction in CO2 emissions compared to the use of 100% new plastic
- Contributes to a 20% reduction in CO2 emissions compared to limestone-derived eco-plastics.
- By mixing scallop shells into the plastic, strength (bending modulus) is improved by about 33%.

Furthermore, because Shellstic is an upcycled material, which utilizes waste, the amount of waste will be reduced to not only help solve waste at a local level, but also globally.

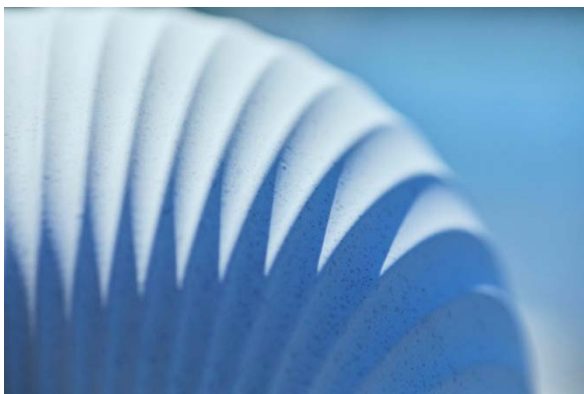
■ Characteristics of SHELLMET: "Biomimicry" design inspired from seashells

SHELLMET is developed based on the concept of "Biomimicry", which is the application of the mechanisms of the natural world to technological development. SHELLMET incorporates a special ribbed structure in its design that mimics the structure of scallop shells, which is part of the material used for helmet production. As a result, the durability of SHELLMET is improved by about 30% compared to the case without the ribbed structure, even though less material is used.

The product design is by a startup studio "[quantum inc.](#)" that creates new products and services in all areas of business development, from conception to implementation.

From material development to product design, creating a product with minimal burden on the environment and sustainability have been central to this process. SHELLMET upcycles scallop shells that would have otherwise been discarded.

The product is available in a total of five color variations: CORAL WHITE, SAND CREAM, DEEP BLACK, OCEAN BLUE, and SUNSET PINK all colors inspired by the oceans, and can be used for a variety of purposes, including disaster prevention, work, and commuting by bicycle.



In conjunction with this announcement, a crowdfunding campaign will be launched on MAKUAKE for pre-order sales.

■ Future plans

In Sarufutsu Village, approximately 270 fishermen wear plastic helmets daily, we will promote the use of eco-plastic by using helmets made of shell-derived eco-plastic as a trial starting in the spring of 2023.

In addition, we plan to gradually develop "SHELLMET" by stockpiling it as a disaster prevention product, selling it to the general public, and introducing it as a tax return gift for hometowns ※ (※ Furusato Nozei: Japan's tax reduction system for the taxpayers who donate to local municipalities).



Through this initiative, we will promote the active use of reusable materials and raise awareness of disaster prevention among village residents.

TBWA\HAKUHODO will continue to disrupt conventions and stereotypes and create new products that meet the needs of the times, while actively taking the global and local environment into consideration. Through creativity, we will continue to create meaningful change in society.

■ Product Summary



Name: SHELLMET

Distributor: Koushi Chemical Industry Co.

Pre-order start: 14th Dec 2022 (Wed)

Official release: Late March 2023 (Planned)

Price: 4,800 JPY

Official Site URL : <https://koushi-chem.co.jp/hotamet/en/>

Concept Movie URL : https://youtu.be/LkUOmluFM_c

Crowdfunding Page : <https://www.makuake.com/project/hotamet/>

■ Comments from the project members

TBWA\HAKUHODO Creative Director Masatoshi Usami

Scallops are the most commonly eaten shellfish by Japanese people - and it is also the shellfish that results in the most amount of waste. If scallop shells are viewed as a resource, rather than waste, they offer new possibilities as a sustainable material. SHELLMET is the first of these. Shells that have protected itself from external enemies can now be used to protect human lives. We hope this project will spread throughout society as a new form of environmental conservation that solves the problem of ocean discards and protects the fishing industry.

Koshi Chemical Industry Co. Planning & Development Supervisor Tetsuya Nambara



Various new eco-plastics are currently being released under the theme of SDGs. However, the reality is that true eco-plastics that meet cost, quality, and sustainability requirements are very limited at this time. While new materials are being mass-produced, hundreds of thousands of tons of waste are incinerated or landfilled each year that could still be used. We believe that it is essential to recycle more waste than ever before in order to promote a sustainable society.

We are pleased to be able to collaborate with the people of Sarufutsu Village and help solve social issues in the region. We are committed to building a sustainable society that utilizes waste, and we hope that similar efforts will spread throughout Japan and around the world.

Sarufutsu Village Mayor Koichi Ito



The effective of "scallop" shells, the treasure of Sarufutsu Village, has been sought for many years. We believe that we can contribute to the realization of a sustainable society if scallop shells, which have once finished their role of protecting itself from external enemies, can next be reborn and become a helmet to protect people's heads. First, we plan to use them for fishermen and as disaster prevention equipment. Sarufutsu Village will continue to seek ways to realize a sustainable society, not

limited to the use of Sarufutsu scallops.

quantum Product Designer Shintaro Monden

SHELLMET's shell-like structure is based on the idea of biomimicry and designed to be both visually pleasing and functionally thoughtful. From material development to design, we aimed to create a sustainable product with minimal burden on the environment. With its minimalistic design, the lightweight

and robust SHELLMET can be used for a long period of time in various situations, from daily use to work sites. Not only the helmet itself, but also other parts including the buckle are all original designs, which give the wearer the feeling that every detail has been carefully crafted, giving the pleasure to own SHELLMET.

【TBWA\HAKUHODO Project Members】

Chief Creative Director	Takahiro Hosoda
Creative Director	Masatoshi Usami
Senior Art Director	Yuhei Ito
Art Director	Takeshi Matsuda
PR Planner	Kyosuke Hashimoto
PR Planner	Suguru Kato
Producer	Yuki Sakamoto
Producer	Omu Inoue

【Project members】

Product Designer	Shintaro Monden (quantum)
CAD Modeling	Minatsu Takekoshi (quantum)
Director	Kohei Inoue (Robot Communications)
Photographer	Junya Taguchi (Freelance)
Designer	Hisahiro Tomonaga (spice)
Retoucher	Takumu Koshiba (CONTRAST Inc)
PR Promoter	Eri Sato (KMC)
PR Promoter	Takashi Hamada (KMC)

■ About Koushi Chemical Industry Co.

A plastic manufacturer located in Higashi-Osaka, founded in 1969. The company develops and produces parts for various products used in hospitals, offices, and convenience stores, as well as household goods. Koushi Chemical Industry Co. is actively involved in social contribution activities and donated more than 200,000 face shields to hospitals nationwide in cooperation with universities in the early days of the COVID-19. Amid calls for a sustainable society, as a company that utilizes petroleum-derived plastics, we are actively engaged in activities to "understand the good and bad of plastics and have a positive impact on society" as our responsibility. As an environmental protection activity that we can do right now, we are focusing on further promoting recycling and utilizing waste that can still be used but is thrown away. We will continue to take on the challenge of contributing to environmental protection and creating a better future through the wise use of materials.

■ About TBWA\HAKUHODO

TBWA\HAKUHODO is a full-service advertising agency based in Tokyo, established in 2006 as a joint venture between Hakuhodo and TBWA Worldwide Inc. With the combination of TBWA's DISRUPTION® methodology, a global network spanning over 100 countries/regions and Hakuhodo's in-depth knowledge of the Japanese market and longstanding reputation for trustworthiness, the agency continues to create and deliver high-quality solutions to all of our clients - solutions that cause change and have the power to get noticed. <https://www.tbwahakuhodo.jp/en>