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Starshield Nanofabric Hull Patches

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Starshield is a hull patch material made with an industrial-grade **S** Nanofabrics developed by the Yugumo Corporation in YE 45.

History	and	Background
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Year of Creation	YE 45
Designer	Yugumo Fleetworks
Nomenclature	YU-U4-1A
Manufacturer	Yugumo Corporation, Yugumo Fleetworks
Fielded by	Yugumo Corporation
Availability	Mass Production
Price	Starting at 200KS per square meter

Starshield Nanofabric Hull Patches were created by Yugumo Fleetworks to be included in Yugumo Standard Damage Control Alcoves and for retail sale in YE 45. They sought an easy-to-utilize fabric that could patch hulls in service by damage control teams or KAIMON/Ascendant Companion. These patches were designed to be long-lasting and reliable until the hull section can be repaired through the replacement of actual hull sections and plating.



Function and Design

Nanofiber Reinforced Repair Patches (NRRPs) are advanced materials used in the maintenance and repair of starship hulls. These patches are designed to provide structural reinforcement and sealing capabilities to repair damage, such as breaches, cracks, or impact points, on the outer hull of a starship.

Nanofiber Matrix

The core of Nanofiber Reinforced Repair Patches (NRRPs) is a nanofiber matrix, typically composed of a mix of advanced nanomaterials like a carbon nanotubes and/or a graphene. These nanofibers are chosen for their exceptional strength, flexibility, and lightweight properties. The nanofiber matrix serves as the primary structural element of the patch, providing the necessary strength and stability to withstand the rigors of space travel and combat.

Self-Healing Nanotechnology

NRRPs incorporate self-healing nanotechnology, which allows the patch to autonomously repair minor damage over time. annobots within the patch can detect and mend small breaches or cracks by bonding with the surrounding material.

Thermal Conductive Layer

Starship hulls are exposed to extreme temperature variations in space. A thermal conductive layer within

the NRRP helps distribute and dissipate heat generated during repairs or from external sources.

This layer ensures that the patch can withstand rapid temperature changes and prevents localized overheating.

Adhesive/Sealing Material

To ensure an airtight and secure seal, NRRPs include Starshield Gel on one side. This material is designed to adhere strongly to the damaged hull surface and create a vacuum-tight seal.

It also prevents the ingress of space debris, gases, or other potential contaminants.

Flexible Outer Shell

The outermost layer of the NRRP is typically a flexible and durable shell made of specialized a polymer. This shell provides additional protection against impacts, micrometeoroids, and radiation.

The flexibility of this outer shell ensures that the patch can conform to the shape of the hull, even on curved or uneven surfaces.

Embedded Sensors

NRRPs also include embedded sensors or nanoscale monitoring devices. These sensors can detect changes in pressure, temperature, or structural integrity, providing real-time feedback to KAIMON and KAIMON/Ascendant Companion for crew analysis.

Useage

Starshield Nanofabric Hull Patches are deployed by personnel or by KAIMON/Ascendant Companion using the graviton beam systems to damaged areas of the hull. Activation is then controlled through KAIMON and KAIMON/Ascendant Companion when triggered by damage control teams.

Prices and Sizes

The size of Nanofiber Reinforced Repair Patches (NRRPs) can vary depending on their intended use and the design specifications of the starship they are meant to repair. NRRPs are typically available in a range of sizes to accommodate various types of damage and repair needs. In general, the cost is 100KS per square meter but bulk orders can receive discounts.

These sizes may include:

Standard Sizes

NRRPs are often manufactured in standard sizes that are commonly used for routine maintenance and minor repairs. These standard sizes might range from small patches measuring a few centimeters in diameter or square to larger patches that cover several square meters.

Custom Sizes

For more extensive damage or irregularly shaped areas on a starship hull, custom-sized NRRPs can be designed and manufactured to fit specific requirements. These patches are tailored to the dimensions of the damaged area, ensuring a precise and effective repair.

Rolls or Sheets

NRRPs can also be produced in the form of rolls or sheets. These continuous rolls or sheets of nanofiberreinforced material can be cut to size as needed, making them versatile for a wide range of repair scenarios.

Miniaturized Versions

In certain cases, miniaturized NRRPs may be used for small-scale repairs or for repairing intricate components, such as sensors or antennae, on the starship's surface. These miniaturized patches can be tiny, depending on the specific application.

Large-Scale Patches

For significant breaches or extensive damage, large-scale NRRPs that cover a substantial portion of the hull may be necessary. These patches can be several meters in diameter or even larger, providing a robust solution for major repairs.

Cross-Platform Functionality

Starshield products can have their annobots programmed to work with systems other than KAIMON at the customer's request. For example, any sold to the Star Army of Yamatai will be configured to work with PANTHEON based systems.

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Art was made in Midjourney by Andrew.

Products & Items Database		
Product Categories	tools	
Product Name	Starshield Nanofabric Hull Patches	
Nomenclature	YU-U4-1A	
Manufacturer	Yugumo Corporation, Yugumo Fleetworks	
Year Released	YE 45	
Price (KS)	200.00 KS	
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https://stararmy.com/roleplay-forum/threads/starshield-gel.70866/#post-441151

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