



# FMS Aerospace Insulation Method


Space is a dangerous place, cold and filled with radiation. Complex shielding systems are very capable of protecting those within its area of effect, but what if those shields were to be overwhelmed or disabled? The [Frontier Manufacturing Service](#) has developed their own way of managing EM radiation and thermal insulation in one sitting.

This method of insulation can convert electromagnetic radiation into electricity, which can be stored or disposed of from there.

## Composition

The insulation is applied in layers to the interior side of the fuselage and can be applied before or after the exterior paneling is installed.


The EM resistant properties are made possible by a layer of  [Polyethylene terephthalate](#)(PET) pressed between two sheets of copper  [Faraday shielding](#). Engineers off-handedly refer to this as “the copper sandwich”.

Thermal insulation is handled by the innermost part which is simply a layer of  [silica aerogel](#). This aerogel is extremely heat resistant, capable of protecting the interior of a ship from the intense heat of atmospheric reentry without shields and preventing the heat of energy weapons from bleeding through armor.

## Application

Installation differs between applications. It can be placed behind panels or beneath the skin of a jet. Whatever the application is, it must form a “cage” for total coverage and be grounded. Many small aerospace applications would be grounded to the engines to dispose of the power spikes generated by the EM radiation while some larger vessels may have a collection system to store it for use in powering systems.

## Price

Pricing varies by the size of the ship and is sold by the meter. A vessel will be quoted by multiplying it's  [Length Overall](#)(LOA) by the price per meter.

- **Pre-Construction:** 10 KS per meter
- **Post-Construction:** 1000 KS per meter
  - Price significantly increases to cover the labor involved in completely disassembling the outer layer of the entire ship and rebuilding it with the insulation.

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