

# Are solar panels made of silicon





## Overview

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Solar panels are made of monocrystalline or polycrystalline silicon solar cells soldered together and sealed under an anti-reflective glass cover. Are solar panels made of silicon?

Around 95% of solar panels on the market are made of silicon. One of the reasons silicon is a popular choice is that it's one of the most plentiful materials available and affordable to create. Silicon is just the main component, though. Solar panels also consist of components made from metal, glass and other materials.

What are solar panels made of?

Solar panels are usually made from a few key components: silicon, metal, and glass. Most panels on the market are made of monocrystalline, polycrystalline, or thin film ("amorphous") silicon. In this article, we'll explain how solar cells are made and what parts are required to manufacture a solar panel.

Why is silicon a good material for solar panels?

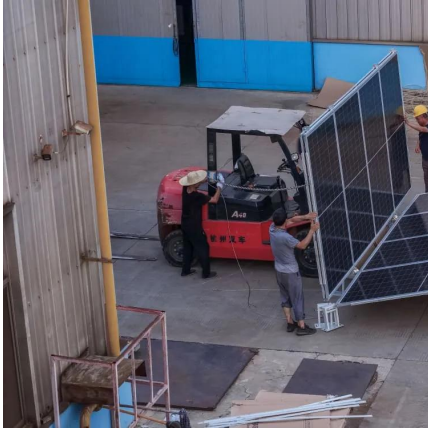
Silicon is not only a cost-efficient material but also durable, which helps to increase the lifespan of solar panels. Approximately 1.1% of the total weight of solar panels is made up of various materials. Copper, for instance, plays a crucial role. Solar panels consist of numerous solar cells connected by copper conductors.

Why are solar cells made out of silicon?

Crystalline silicon cells are made of silicon atoms connected to one another to form a crystal lattice. This lattice provides an organized structure that makes conversion of light into electricity more efficient. Solar cells made out of silicon currently provide a combination of high efficiency, low cost, and long lifetime.



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Silicon  
Thin-Film Photovoltaics  
Perovskite Photovoltaics  
Organic Photovoltaics  
Silicon is, by far, the most common semiconductor material used in solar cells, representing approximately 95% of the modules sold (link is external) today. It is also the second most abundant material on Earth (after oxygen) and the most common semiconductor used in computer chips. Crystalline silicon cells are made of silicon atoms connected to one See more on energy.gov



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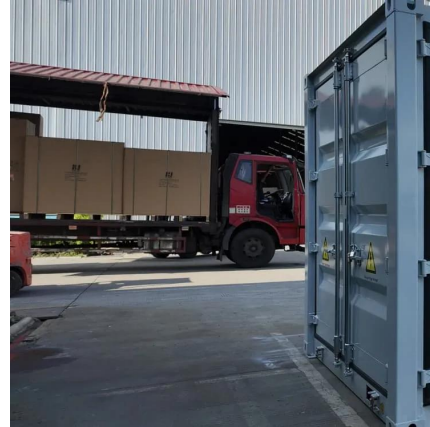
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