

# **Solar glass requires antimony trioxide**





## Overview

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Does solar glass contain antimony?

However, the composition of solar glass varies, especially concerning antimony (Sb) content, depending on the production method. Antimony is used to enhance the performance of patterned solar glass but introduces environmental and health concerns, complicating recycling efforts.

Is antimony used in Photovoltaic Glass?

The flame-retardant sector currently accounts for around half of end use of antimony. “The use of antimony trioxide as a clarifying agent in photovoltaic glass is a developing trend, and it is expected to maintain rapid growth in the coming years,” Kang said.

Why is antimony a problem for solar glass recycling?

Currently, the import of modules from outside the EU with variable antimony content drastically complicated recycling efforts of solar glass. Indeed, antimony poses environmental and health risks and can lead to undesirable interactions with the manufacturing process. To address this issue, ESIA members are calling for:

Should PV module manufacturers be required to disclose antimony compounds?

To address these challenges, the ESIA Recommendation paper suggests that the European Union should consider mandating PV module manufacturers under the upcoming Ecodesign regulations to disclose the composition and manufacturing process of solar glass, including additives like antimony compounds.



## Solar glass requires antimony trioxide

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### [Antimony trioxide production method and production ...](#)

Jul 4, 2024 · Manufacturing method of antimony trioxide I. Introduction Antimony trioxide ( $\text{Sb}_2\text{O}_3$ ) is an important raw material for the production of chemicals, which is widely used in the fields ...

### [Antimony trioxide photovoltaic glass](#)

Nov 27, 2025 · Overview Can antimony containing glass be used in solar PV panels? ncept Note Print on Management of Antimony Containing Glass from End-of-Life of the Solar PV Panels1. ...



### [A Summary of Smelting and Secondary Recovery Process of Antimony](#)

Jan 29, 2025 · Antimony is a critical and strategic metal resource due to its excellent electrical conductivity and stability at room temperature, which makes it highly versatile in both industrial ...



### [European Solar PV Industry Alliance \(ESIA\): Publication of the ...](#)

Oct 9, 2023 · The "Value Chain" recommendation paper focuses on addressing uncertain antimony content in solar glass, which is a hurdle for its later recycling. Currently, the import of ...



### [Necessity for recycling photovoltaic glass: Managing ...](#)

The same study also reported that antimony trioxide leaches from solar glass after prolonged contact with water and subsequently undergoes hydrolysis, forming the antimony oxo anion ...



### [OPTIMIZING SUSTIANABILITY: BALANCING ANTIMONY ...](#)

Mar 26, 2025 · This study investigates the effects of the antimony content in solar glass on its optical properties and the associated environmental factors. Glass samples with high, low and ...



### [Photovoltaics to become largest use of antimony, Twinkling ...](#)

Nov 24, 2023 · The flame-retardant sector currently accounts for around half of end use of antimony."The use of antimony trioxide as a clarifying agent in photovoltaic glass is a ...







## US Domestic Antimony Production Restart After 24 Years

Oct 20, 2025 · Moreover, solar panel manufacturing requires antimony trioxide as a catalyst in polyethylene terephthalate (PET) production for protective backsheets. The Inflation Reduction ...



## Common Name: ANTIMONY TRIOXIDE

Jun 18, 2012 · Antimony Trioxide is a white, odorless crystalline (sand-like) powder. It is used as a flame-proofing agent, in pigments and ceramics, to stain iron and copper, and to decolorize ...



## Necessity for recycling photovoltaic glass: Managing

Oct 15, 2025 · Terawatt-scale photovoltaic (PV) deployment, with an annual installation of 3.4 TW, is essential to combat climate change. However, manufacturing this amount of PV requires a ...



## Addressing uncertain antimony content in solar glass for recycling

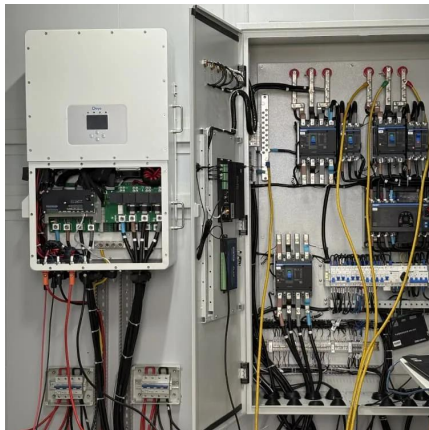
Nov 7, 2023 · Addressing uncertain antimony content in solar glass for recycling  
Endorsements, adoptions of opinions and recommendations in this paper do not necessarily represent the ...





## Addressing uncertain antimony content in solar glass for ...

Glass accounts for a significant proportion of PV module weight, making glass recycling an environmentally beneficial process due to reduced CO2 emissions and energy savings. ...



## Antimony-Free Solar Glass , British Glass

At that time, dispensation was granted to optical glass and solar glass because the European industry had then represented that it was not possible to make solar products without it. ...

## Release: ESIA Recommendation Paper Addressing uncertain antimony

Oct 6, 2023 · However, the composition of solar glass varies, especially concerning antimony (Sb) content, depending on the production method. Antimony is used to enhance the performance ...



## Concept Note/ Blue Print on Management of Antimony ...

Jul 11, 2022 · The textured solar glasses used in solar PV modules contain Antimony in the form of Antimony trioxide (ATO). ATO is considered by World Health Organization [WHO 2003) to ...



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