



LLSE CONTAINERS

# Amount of antimony used in solar glass





## Overview

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Proportion of Antimony in solar glass is typically 0.2% to 0.3% (2 to 3 million ppb). Each PV module has a front glass weighing about 16 kg and thus an Antimony content of 32 to 48 grams. Can antimony containing glass be used in solar PV panels?

Concept Note Print on Management of Antimony Containing Glass from End-of-Life of the Solar PV Panels1. Background An application OA No. 473 of 2017, Niharika Vs Union of India and Others was filed before Hon'ble NGT regarding use of Antimony containing glasses used in solar Photo.

How can the US reduce antimony levels in solar glass?

The U.S. could also implement a threshold for antimony levels in solar glass, gradually reducing the allowable amount over time. This would encourage manufacturers to phase out the use of antimony in their production processes and facilitate more straightforward recycling in U.S. facilities.

Can you recycle solar glass with antimony?

This makes recycling solar glass with antimony both costly and technically challenging. Transporting glass cullets (crushed glass ready for recycling) also presents a logistical challenge, as their low density makes transport costly and inefficient. What is the regulatory support for solar glass recycling?

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.



## Amount of antimony used in solar glass



### [Efficiency and Sustainability: Recent ...](#)

Feb 3, 2021 · Moreover, it should be ensured that glass containing antimony is not mixed with normal glasses during recycling, as it may contaminate ...

### [Amount of antimony metal used in photovoltaic glass](#)

A Summary of Smelting and Secondary Recovery Process of Antimony As Fig. 3 shows, the aforementioned three groups are also used for various other applications. First, sodium ...



### [Concept Note/ Blue Print on Management of Antimony ...](#)

Jul 11, 2022 · 2. Antimony Containing Solar PV Panels Antimony is used in solar panel glass to improve stability of the solar performance of the glass upon exposure to ultraviolet radiation ...

### [Impact of silicon and other contaminants on the melting ...](#)

Oct 15, 2025 · This study investigates the reaction between PV panel glass and contaminants generated during its disassembly, especially antimony oxide in PV glass and Si contaminants ...



#### [OPTIMIZING SUSTAINABILITY: 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 ...



#### [Addressing uncertain antimony content in solar glass for ...](#)

Nov 7, 2023 · Glass accounts for a significant proportion of PV module weight, making glass recycling an environmentally beneficial process due to reduced CO<sub>2</sub> emissions and energy ...



#### [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 ...



### Unique Properties of Antimony Glass

Dec 3, 2025 · Antimony glass, a type of glass that incorporates antimony oxide (Sb<sub>2</sub>O<sub>3</sub>) as a key ingredient, has been used for centuries in various applications, from ancient artifacts to more ...



### Proportion of antimony oxide in photovoltaic glass

Proportion of Antimony in solar glass is typically 0.2% to 0.3% (2 to 3 million ppb). Each PV module has a front glass weighing about 16 kg and thus an Antimony content of 32 to 48 grams.

### Solar cell using low iron high transmission glass with antimony ...

Mar 1, 2010 · A high transmission and low iron glass is provided for use in a solar cell. The glass substrate may be patterned on at least one surface thereof. Antimony (Sb) is used in the glass ...



### Analysis of Material Recovery from Silicon Photovoltaic ...

Antimony (Sb) is used in the glass to improve stability of the solar performance of the glass upon exposure to ultraviolet (UV) radiation and/or sunlight.



### The Main Application Of Antimony

Apr 1, 2025 · Antimony is used as a clarifying agent in photovoltaic glass, which can improve energy efficiency by about 10-20% and prevent the generation of bubbles. Solar glass typically ...



### Glass Solar Panels: Tomorrow's Energy ...

Jan 6, 2023 · Glass solar panels can help reduce electricity bills. Learn how solar windows turn sunlight into renewable energy and if we should start ...



### Necessity for recycling photovoltaic glass: Managing ...

However, manufacturing this amount of PV requires a critical evaluation of material demands, particularly antimony (Sb), which is widely used in PV glass production. Our study focuses on ...



### Guide for Ensuring Solar Glass Recycling Happens for Your ...

3 days ago · Checklist for Ensuring Solar Glass Recycling To help Developers, EPCs, and Utilities determine whether their solar glass is being properly recycled, the following checklist can be ...



## Innovative Process Developed for Extracting Antimony from Solar Panel Glass

Sep 29, 2025 · This article explores a new process for extracting valuable antimony from the glass of solar panels, aimed at solving disposal challenges in the 2030s.



### Amount of antimony used in photovoltaic glass industry

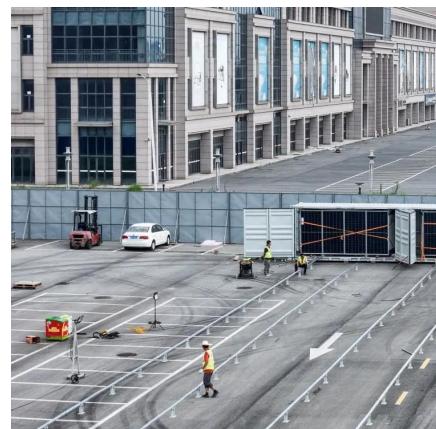
What is antimony used for in solar panels?  
Antimony (Sb) is used in the glass of solar panels to improve stability of the solar performance of the glass upon exposure to ultraviolet (UV) ...



### Exploring antimony material flow in the context of energy ...

Aug 1, 2025 · Among the different applications, EEE accounted for the largest share of the antimony stock (54 %), followed by PV glass in the construction sector (23 %), highlighting the

...



### Release: ESIA Recommendation Paper ...

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



[Find a way to deal with used solar panels ...](#)

Jan 9, 2019 · The glass used in solar panels cannot be recycled because of the presence of impurities like plastics, lead, cadmium and antimony. ...



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