

Global Die Attach Film Market growth by manufacturers, regions, type and application, price

Global Die Attach Film Market To Witness Huge Gains Over 2023-2033 and Top Leading Countries

NEW YORK, NY, UNITED STATES, March 17, 2023 /EINPresswire.com/ -- Market Overview

The Global Die Attach Film Market refers to the market for thin, pressure-sensitive films used to attach semiconductor chips to substrates or lead frames in electronic devices. Global Die Attach Film market size was valued at USD 10.9 billion in 2023 and is projected to grow from USD 23.75 billion in 2033, exhibiting a CAGR of 8.1 % in the 2023-2033 period.



These films are typically made from epoxy or acrylic adhesive materials and are designed to provide a reliable and durable bond between the chip and the substrate. The die-attach film market refers to the market for thin, pressure-sensitive films used to attach semiconductor chips to substrates or lead frames in electronic devices. These films are typically made from epoxy or acrylic adhesive materials and are designed to provide a reliable and durable bond between the chip and the substrate.

Key Takeaways

Die attach film (DAF) is a type of adhesive film used to attach a semiconductor die to a substrate in semiconductor manufacturing. DAF is a polymer-based adhesive film that is applied to a substrate in a semi-solid state and then cured by heat and pressure to form a strong bond between the dye and the substrate. DAF is widely used in semiconductor manufacturing due to its high bond strength, excellent thermal and electrical conductivity, and compatibility with

various substrates and die materials.

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Restraints-

DAF is sensitive to heat and exposure to high temperatures can cause the film to melt or break. This can be a problem during the die attach process, which typically involves high-temperature bonding. Die attach film (DAF) is a material used in the semiconductor industry to attach a semiconductor die to a substrate or lead frame. DAF is available in limited quantities, which may not be suitable for all applications. Thicker films may provide better mechanical support, but may be more difficult to handle during the assembly process.

Challenges-

DAF is susceptible to contamination during the manufacturing process, which can affect its adhesion properties. Contaminants such as dust, oils, and moisture can weaken the bond between the chip and the package, leading to failure. DAF must be applied uniformly to ensure that the chip is securely attached to the package. However, achieving uniformity can be challenging due to variations in film thickness and the pressure applied during the bonding process.

Recent Development-

Thin Film- The thickness of DAF has been reduced to 5 microns, which reduces the overall package height and allows more chips to be integrated into a single package.

High Thermal Conductivity (HTC)- DAFs with high thermal conductivity have been developed to improve heat dissipation from the chip. HTC DAFs can transfer heat from the chip to the package more efficiently, reducing the risk of overheating and improving IC reliability.

Fluxing ability- Some DAFs have been developed with built-in fluxing agents, which can remove the oxide layer on the surface of the chip and substrate during the attachment process, improving adhesion strength.

Low-temperature curing- DAFs with low-temperature curing capabilities have been developed to reduce the risk of chip damage during the attachment process. These DAFs can be cured at temperatures as low as 80°C, reducing thermal stress on the chip.

Global Market Segmentation:

Types-

Non-Conductive Type Conductive Type

Applications-

Die to Substrate Die to Die Film on Wire

Key Players-

Furukawa
Henkel Adhesives
LG
Al Technology
Nitto
LINTEC Corporation
Hitachi Chemical

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Key Questions

What is the composition of the DAF material?

DAF (dissolved air flotation) is a water treatment process that involves removing suspended particles, oils and other contaminants from water by creating small bubbles of air attached to the particles and floating to the surface for removal.

What are the adhesive and cohesive properties of the DAF?

Adhesion is the ability of a material to stick to another material, while cohesion is the ability of a material to stick to itself.

What is the curing process for the DAF?

DAF (dissolved air flotation) is a wastewater treatment that uses air to remove suspended solids, oils and grease from water. The curing process is not specific to DAF, but is a general term used to describe the process of hardening or thickening a material by chemical or physical means.

How does the DAF impact the electrical and thermal performance of the package?

DAF can affect package electrical performance by increasing package parasitic capacitance and resistance. The thickness of the DAF layer can increase parasitic capacitance and resistance,

which reduces signal propagation and increases power consumption.

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