

# Double-Sided Adhesive Tape for HDPE, 150DSA

## Product Description

The Double-Sided Adhesive Tape with High Strength Acrylic Adhesive 110DSA is specifically designed for attaching optical lenses made of HDPE to cases crafted from materials like ABS. This tape offers excellent bonding performance, particularly on low surface energy plastics like HDPE and other materials such as polypropylene and powder-coated paints. Additionally, the adhesive demonstrates strong adhesion on surfaces contaminated with oils, ensuring reliable application for components used in optical sensors, including PIR and TMOS sensors. When paired with an appropriate case design, this tape significantly enhances water and dust resistance, supporting compliance with IP-grade standards.

## Structural Details

Product Number	Adhesive Thickness (Front Side)	Carrier Type	Adhesive Thickness (Back Side)	Liner Color, Type, Thickness	Total Thickness (w/o liner)
150DSA	0.069 mm (2.7 mil)	Polyester	0.069 mm (2.7 mil)	PET or Polycoated Kraft	0.15 mm (5.9 mil)

## Key Performance Metrics

Key Performance Metrics	Value
Product Number	150DSA
Adhesive Type	High Strength Acrylic
Tape Thickness	0.15 mm (5.9 mil)
Breakdown Voltage	6900 volts
Dielectric Strength	1200 volts/mil
Adhesion (15 min dwell @ RT)	100 oz/in (10.9 N/cm)
Adhesion (72 hr dwell @ RT)	125 oz/in (13.7 N/cm)
Shear Strength (RT)	10,000 Minutes
Shear Strength (158°F/70°C)	10,000 Minutes

## Temperature Tolerance

The tape maintains long-term stability at temperatures up to 250°F (121°C) and withstands short-term exposure to temperatures as high as 300°F (149°C).

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## Resistance to Humidity

Even under 100% relative humidity at 100°F (38°C), the adhesive exhibits no adverse effects on bonding performance, ensuring durability in humid conditions.

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## UV Durability

The adhesive is resistant to degradation caused by exposure to ultraviolet light, oxidation, or ozone, ensuring long-lasting performance in outdoor applications.

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## Application Recommendations

To achieve optimal bonding strength, ensure surfaces are clean, dry, and properly prepared. Firm application pressure improves adhesive contact. Recommended application temperatures range from 70°F to 100°F (21°C to 38°C). For applications at temperatures below 50°F (10°C), initial adhesion may be reduced, but performance remains reliable once the bond is properly established.

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## Environmental Performance

The tape is designed to endure challenging environmental conditions. It maintains high bonding strength after exposure to high humidity, UV light, water immersion, and temperature cycling. Additionally, the tape resists common chemicals like oil, mild acids, and alkalis, ensuring dependable performance in diverse applications.

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## Potential Uses

- Bonding foam to powder-coated surfaces.
  - Enhancing adhesion to low surface energy plastics, such as HDPE.
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## Storage Guidelines

Store the tape in its original packaging at a temperature of 70°F (21°C) and 50% relative humidity to preserve its performance and longevity.

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## Product Shelf Life

When stored under recommended conditions, the tape retains its performance and properties for up to two years from the date of manufacture.

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## Technical Details

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