Avery Dennison Label and Packaging Materials Troubleshooting Guide

South Asia November 2021

Troubleshooting Guide

Conversion & Application

Digital

Problem Remedies Cause GSM setting not as per · Adjust GSM setting as per Laminate/ substrate Nail test failure Laminate/substrate · Replace toner, fresh lot/batch Toner composition, Heavy ink/ · Try different substrate lot; consult with AD Tech rep toner deposition Consult machine manufacturers for substrate Insufficient fusing/drying compatibility Non compatibility with substrate Static charge Uncontrolled pressroom · Maintain pressroom conditions (post printing) (Temp 23°C & RH 50%) conditions (temp & Humidity) Excessive heat and friction · Adjust GSM setting as per Laminate/ substrate during fusing · Inspect machines auxiliaries for effectiveness Static eliminator not functional • Consult substrate supplier and machine manufacturer Multiple sheet Uncontrolled press room · Keep material in original packing feeding / jamming conditions · Maintain pressroom conditions GSM setting not as per (Temp 23°C & RH 50%) Laminate/substrate Adjust GSM setting as per Laminate/ substrate High static build up, check Inspect machines auxiliaries for effectiveness static eliminator Poor toner · Inefficient ink fusing/drying · Keep material in original packing; adhesion Temp 23°C & RH 50% Toner composition/ expired · Inspect fusing unit Non compatibility with · Replace toner, fresh lot/batch substrates top coat • Try different substrate lot; consult with AD Tech rep · Consult machine mfr for substrate compatibility Post print curl • Optimise GSM setting on machine. · High fusing temperature Heavy toner deposition • Optimise profile/ ink deposition Uncontrolled press room · Maintain pressroom conditions (Temp 23°C & RH 50%) Machine decurler settings · Consult substrate supplier and machine manufacturer



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Offset

Problem

Pin holes (Inconsistent printability)



Cause

- Ink rheology not maintained
- Non-standard press room conditions

Remedies

- Check the rheology of ink or Consult ink manufacturers.
- · Keep material in original packing.
- Maintain pressroom conditions (Temp 23°C & RH 50%)
- Use different lot material on the same machine parameters and Consult with the AD representative

Mis-registration



- Press parameters not aligned (plate, blanket, and substrate)
- Blanket swollen or embossed
- Image not aligned on plate
- Use of excess fountain solution (dimensional instability)
- Curling because of guillotine at customer end
- Align plate, blanket, and substrate on press.
- Replace Blanket with new one.
- Make new plate
- Check alignment and pressure of roller.
- Avoid multiple pass printing and minimise time b/w passes.
- Avoid the guillotine process in std. Size

Air bubbles (post lamination)



- Thermal Lamination
- Wrong / excessive of anti setoff powder •
- High lamination tension & uneven Nipping Pressure
- Ink not dried.
- Wet Lamination
- Water in higher proportion in adhesive
- · Foaming in adhesive

- Change anti setoff powder with a fine one.
- Maintain Press room conditions. Ideally (Temp 23 0C & RH 50%)
- Optimize tension & Pressure
- Use fast setting ink & Sufficient Dwell time after printing.
- Consult with adhesive supplier
- Add anti Foaming in adhesive

Ink set-off (post print)



- Use of excess fountain solution
- Insufficient spray of set-off powder
- Rough Handling/ High stacking
- Ink not cured/ oxidised/ dried
- Ink layer too thick/ excessive moisture in paper/ RH high
- Maintain PH & conductivity during press run, Replenish fountain solution.
- Inspect quality of set-off powder and optimize its spray
- Reduce stacking height
- Check IR/UV lamp intensity

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Application

Problem

Label edge lifting (post labeling)



Cause

- Inconsistent massaging/ pressure
- Application temp too low.
- · Heavy ink/varnish deposition on edges.
- · Low surface energy substrate.
- Adhesive incompatible with substrate

Remedies

- Review massaging process and use squeegee
- Application temp.should be as per TDS
- Avoid heavy ink deposition on edges.
- Pull liner instead of face to avoid face curl.
- Low surface energy substrate required aggressive adhesive
- · Consult with the AD representative

Label fall-off (post labeling)



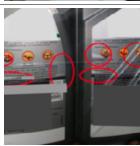
- Moisture/contamination on substrate
- Contents migrating through containers.
- Substrate Temp./application temp too low.
- Rough surface /Adhesive coat weight too low
- · Adhesive not compatible with substrate
- Ensure cleaning of substrate before application.
- Ensure no migration through containers.
- Application temp. As per TDS
- Try aggressive / high adhesive GSM products
- · Consult with the AD representative.

Abrasion failure (transit test)



- Protection layer (Varnish/lamination)
- Excess friction b/w two container on label surface
- Use of appropriate Varnish/Lamination
- Use separators for avoiding excess friction b/w containers.
- Design outer corrugated box as per container size and stacking..

Air bubble (post labelling)



- · Inconsistent massaging/ pressure
- Container surface not smooth
- Contamination/Moisture on Surface.
- Hot Filling of Container.
- Application temp too low/ air entrapment during application.
- Ensure sufficient massaging and use squeegee to avoid air entrapment during application.
- Ensure cleaning of substrate before label application.
- Hot filling required special adhesive, Ensure label application at atmospheric conditions
- Application temp. as per TDS
- Consult with the AD representative.

