

# Optimizing PCR Usage in Film and Bag Products

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# Challenges of Film & Bag Production

- Trash bag film a fraction of the thickness of a human hair
  - Contamination causes holes in film, loss of production, scrap & waste
  - Plastic resins for film production are highly engineered materials
  - Plastic Film-Grade resins are optimized for high production rates and film strength

# Film & Bag Blown Film Production Process



# Film-Grade PCR Requirements

- Contamination-Free (gels, dirt, specks)
- Minimal odor
  - Bags are used in kitchens, hospitals, offices
- Free of Toxic Materials
  - Employee Safety
  - End-use Safety
- Consistent Lot-to-Lot
  - Bag Producers cannot afford to make excess scrap with today's raw material costs

# Film-Grade PCR Consistency

Dart Impact of HMW-HDPE Bags @ 0.7 mil

% PCR	Control (no PCR)	Test #1	Test #2	Test #3
10%	246	138	180	160
20%	252	188	146	141