Material Adhesion Comparison

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Adhesion is the attraction between unlike materials. The strength of the adhesion is determined by the surface energy of the item being identified. The higher the surface energy, the greater the likelihood for the label to adhere. A lower surface energy product will be more difficult for a label to adhere.

These following charts are based on relative adhesion after 24 hour dwell within each given surface energy category.

SMOOTH SURFACE (High Surface Energy)

Typical surface energy levels for this category are above 50 Dynes/cm.

> Surface Examples: Stainless Steel Glass Copper Smooth Metal Aluminum Smooth Plastic

TEXTURED/ROUGH SURFACE (Medium Surface Energy)

Typical surface energy levels for this category are between 38-50 Dynes/cm.

Surface Examples

Cast Metal Polyurethane Nvlon ABS Alkyd Enamel Polycarbonate Polyester **Epoxy Paint** Acrylic

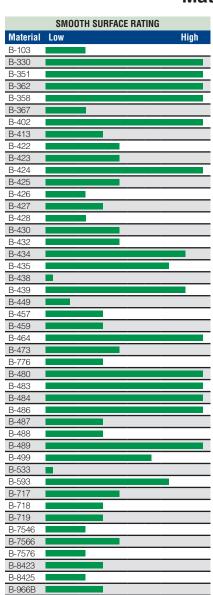
HIGHLY TEXTURED SURFACE (Low Surface Energy)

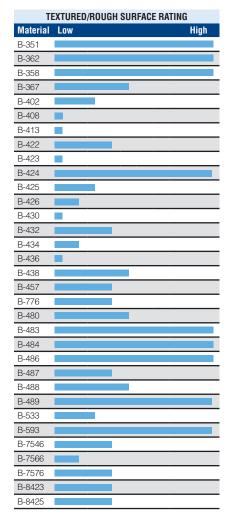
Typical surface energy levels for low surface energy products are below 38 Dynes/cm.

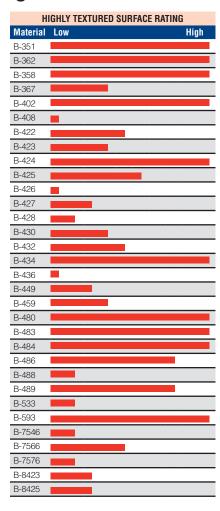
Surface Examples

Polystyrene Polypropylene Teflon Acetal Polyethylene Powder Coatings Highly Textured Highly Textured ABS

Material/Surface Adhesion Ratings







Please see Brady Technical Data Sheets at BradvID.com/techdata for specific adhesion values. Testing in the specific application is recommended.