



9 solutions

for production
identification challenges

Why this guide?

Products and components often have several distinct identification challenges. Depending on their size, their specifications and the environment they are exposed to, a variety of identification solutions are needed.

Whether you need barcode labels, electrostatic dissipative labels, equipment identification, rating plates, circuit board labels, product or component identification, this guidebook will help you select and begin to specify labels that solve your identification challenges.

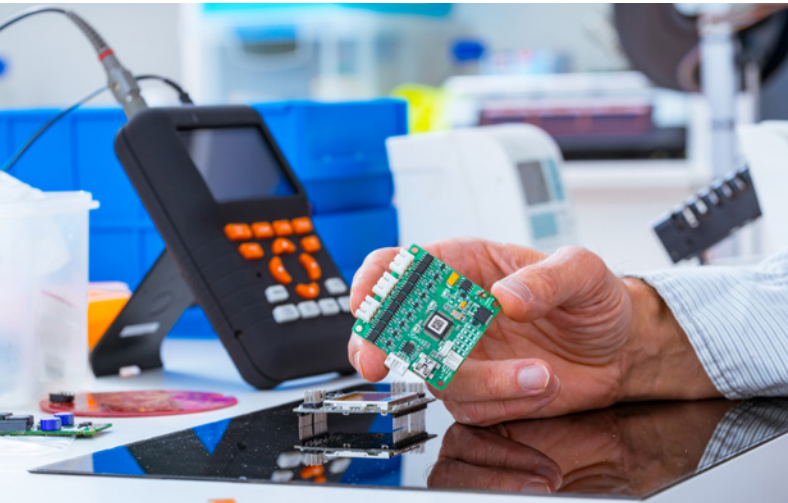


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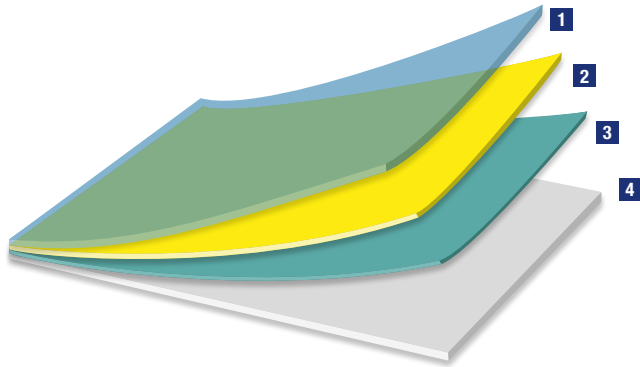
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INTRODUCTION

Construction of a professional label

The combination of label liner, adhesive, substrate and topcoat provides a professional label's features, resistances, capabilities and durability.



1. The topcoat gives the label its colour and finish, receives the print, and increases resistance against weathering, flames, chemicals or heat.
2. The substrate gives the label its form, strength, flexibility, chemical and temperature resistance.
3. The adhesive attaches the label to specific surfaces.
4. The liner carries and releases the label when it is applied.

Brady offers a wide range of professional labels optimised for durability in a great variety of industrial contexts.

What could happen with the wrong label?

Using the wrong label can lead to production loss, process errors, wasted time and unhappy customers. Avoid these issues:



Unreadable text

Using the wrong labels can lead to unreadable text, fading and smearing. The right label uses the ink and protective coatings that stand up to the needs of your application.



Peeling topcoat

Using labels with the wrong topcoat can cause the topcoat to peel off, leaving the print and label surface unprotected. The right label will stay intact when exposed to the temperatures and chemicals in your production processes.



Shrinkable substrate

Labels with the wrong substrate may shrink or become discoloured. The right label will stay intact.



Wrong adhesive

Labels with the wrong adhesive could lift, fall off, move around or leave residue. The right label uses the best adhesive for the surfaces they are attached to.

Keep these elements in mind when considering the labels in the following chapter and which materials solve your challenges.

Product performance icons

Brady's series of attribute icons provides at-a-glance information on performance attributes for each of the label materials. Watch for these icons through this brochure to help you easily identify product performance features that fit your needs.

Abrasion resistance

Resistance proven with testing on Taber Abraser equipment with CS10 grinding wheels and weighted arms.



Fuel/oil resistance

Resistance proven with Immersion Test in Gasoline, Break Fluid, SAE 30wt Oil, JP-8 Jet Fuel, MIL-H-5606 Oil.



High heat resistance

Resistance to 100°C.



Low temperature resistance

Labels subjected to -40°C, -70°C or -80°C for 30 days or 1000 hours.



Outdoor durability

Materials offer up to 10 year outdoor legibility and durability



Solvent/chemical resistance

Resistance proven with MEK / Acetone / Toluene / Xylene Immersion Test.



Tamper-indicating

Materials indicate tampering through a visible fractured label or footprint.



9 PRODUCTION IDENTIFICATION CHALLENGES



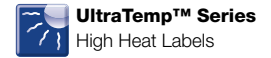
PCB identification in harsh environments



- Must keep barcodes and alphanumeric identification legible in wave solder environments and electrical component pre-process industry
- Must resist extreme wash protocols and aggressive cleaning chemicals
- Must be compatible with auto-apply applications



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Brady polyimide B-7727

- White gloss polyimide with ultra-durable permanent acrylic adhesive
- High heat (300°C) resistance
- Excellent performance in reflow, wave solder and board washing
- Great legibility, even after exposure to chemicals
- Surface mount and through-hole assembly
- Compatible with cleaning chemicals from Zestron and Kyzen
- Reduced liner width label range available (APL range)
- Ideal for auto-apply

Performance



ABRASION
RESISTANCE



HIGH HEAT
RESISTANCE



LOW TEMPERATURE
RESISTANCE



SOLVENT/CHEMICAL
RESISTANCE

Regulatory

- UL 969 recognised with Brady's R6000HF ribbon
- Reach & RoHS compliant
- Dibutyl and dioctyl tin free

Alternative solutions

- B-727
- Matte: B-728, B-729
- ESD Gloss: B-717, B-718
- ESD Matte: B-719
- No re-flow required: B-777
- Laser engravable: B-730 & B731 (ESD)
- Protective masking film: B-7634

Legible inventory labels



- Must be applicable on different surfaces including glass, metal and plastics
- Must be durable both in & outdoor



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Brady polyester B-423

- White gloss polyester with permanent acrylic adhesive
- Long-lasting, durable material
- Proven resistance to fuel and oil
- High heat (110°C) and low temperature (-70°C) resistance
- Abrasion resistance
- Outdoor use on glass, thermoset polyester plastic and polyvinyl fluoride plastic surfaces to support solar panel identification applications
- Ideal for component identification, barcoding, asset and inventory tracking in electronics, automotive, power and laboratories

Performance



ABRASION
RESISTANCE



HIGH HEAT
RESISTANCE



LOW TEMPERATURE
RESISTANCE



FUEL/OIL
RESISTANCE



OUTDOOR
DURABILITY

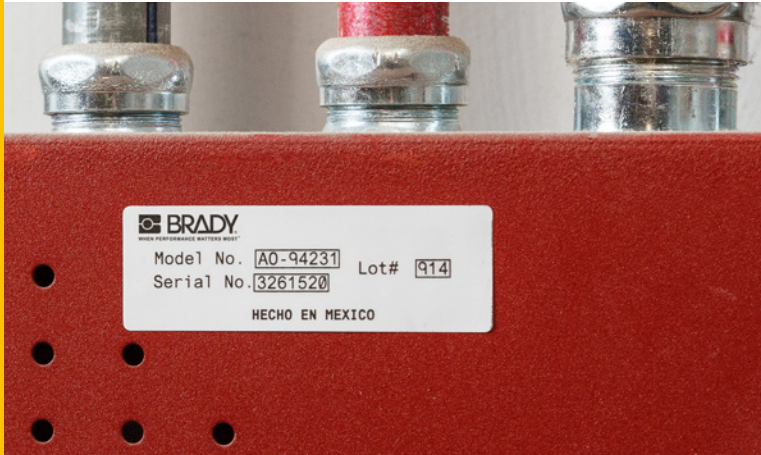
Regulatory

- UL 969 recognised & CSA certified with Brady's R6000HF ribbon
- Reach & RoHS compliant
- Meets requirements of a halogen free material per DIN VDE 0472 part 815

Alternative solutions

- Low cost: B-8423
- Auto-apply: B-7423
- Clear: B-430
- Matt: B-459 & B-488
- Metallised: B-428, B-434 & B-435
- Aggressive adhesive: B-422, B-432, B-483, B-484 & B-489
- Metallised aggressive adhesive: B-486

Cost-saving alternative for engraved plates

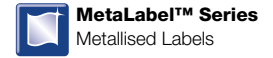


- A practical and customisable alternative for face and name plates
- Must be applicable on different surfaces and resist temperature variations



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Preferred solution #3



Brady metallised polyester B-428

- Matt metallised polyester with permanent acrylic adhesive
- Metallised, light grey finish
- Flexible material with high-tack adhesive for easy and long-lasting adhesion
- Long-lasting, durable material
- Ideal for high quality/density rating plates, control panels and asset tags with barcodes, alphanumeric characters, graphic symbols and logos

Performance



HIGH HEAT
RESISTANCE



LOW TEMPERATURE
RESISTANCE



FUEL/OIL
RESISTANCE



SOLVENT/CHEMICAL
RESISTANCE



OUTDOOR
DURABILITY



ABRASION
RESISTANCE

Regulatory

- UL 969 recognised & CSA certified with Brady's R4300 ribbon
- Reach & RoHS compliant
- Meets requirements of a halogen free material per DIN VDE 0472 part 815

Alternative solutions

- Metallised gloss: B-434, B-435
- Metallised matt: B-428, B-486 & B-7563
- Metallised matt aggressive adhesive: B-486
- Polyester with metallic colour: B-413 & B-480

Flexible alternative for engraved plates



- Easy to print on demand solution with engraved plate thickness
- Less expensive and hassle free



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Preferred solution #4

Brady polyester B-7593

- Gloss polyester with a compressible foam carrier and a permanent acrylic adhesive
- More durable than a normal label
- Engraved plate thickness
- Foam-backed aggressive adhesive
- 6 different colours: white, silver, yellow, red, green and black
- Ideal to replace engraved and plotted plates for identification of electrical components, electrical cabinets, push buttons, patch panel, switches, ...
- Also ideal for rating and serial plates using alphanumerics that require name plate quality

Performance



HIGH HEAT
RESISTANCE



FUEL/OIL
RESISTANCE



ABRASION
RESISTANCE



OUTDOOR
DURABILITY



SOLVENT/CHEMICAL
RESISTANCE

Regulatory

- Reach & RoHS compliant



White



Silver



Yellow



Red



Green



Black

An economical chemical resistant label



- Must keep barcodes legible in chemical environments
- Must resist chemicals and solvents



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Brady polypropylene B-425

- Matt white polypropylene with permanent acrylic adhesive
- Can be written on, ideally with chemical resistant ink
- Not recommended for outdoor use
- Ideal for industries including consumer electronics, electronics and laboratories

Performance



LOW TEMPERATURE
RESISTANCE



FUEL/OIL
RESISTANCE



SOLVENT/CHEMICAL
RESISTANCE

Regulatory

- UL 969 recognised & CSA certified with Brady's R4300, R6200, R6400 & R7961 ribbon
- Reach & RoHS compliant
- Meets requirements of a halogen free material per DIN VDE 0472 part 815

Alternative solutions

- Removable: B-449

An all-surface label



- Must adhere to highly textured, rough and low energy surfaces including walls, doors, panels, PVC piping and powder coated surfaces
- Must resist grease, oil, dirt, grime and common industrial chemicals
- Must have outdoor durability



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Brady vinyl B-439

- Matt coloured vinyl with permanent acrylic adhesive
- Pliable vinyl that conforms well to smooth, rough surfaces and low energy surfaces
- Lasts up to 10 years outdoors
- 8 different colours: white, yellow, green, red, blue, orange, purple and black
- Also available in continuous format
- Ideal for identification that requires colour variety, such as finished product identification, rating plates and general purpose identification

Performance



LOW TEMPERATURE
RESISTANCE



ABRASION
RESISTANCE



OUTDOOR
DURABILITY

Regulatory

- Reach & RoHS compliant



White



Yellow



Green



Red



Blue



Orange



Purple



Black

An engine component identification label



- Must have extreme chemical, fuel, UV and abrasion resistance
- Must be economical



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Brady polyester B-7573

- Matt white polyester with permanent acrylic adhesive
- No overlaminates needed to reduce material cost
- Innovative and unique all-in-one solution: chemical, elevated temperature, UV and scratch resistance
- Superior chemical resistance
- Excellent abrasion resistance
- Excellent high temperature resistance (up to 150°C)
- Ideal for auto-apply
- Ideal for engine component marking in automotive, aerospace and chemical industries and in laboratory applications that require high chemical, temperature and UV-resistance

Performance



LOW TEMPERATURE
RESISTANCE



ABRASION
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FUEL/OIL
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HIGH HEAT
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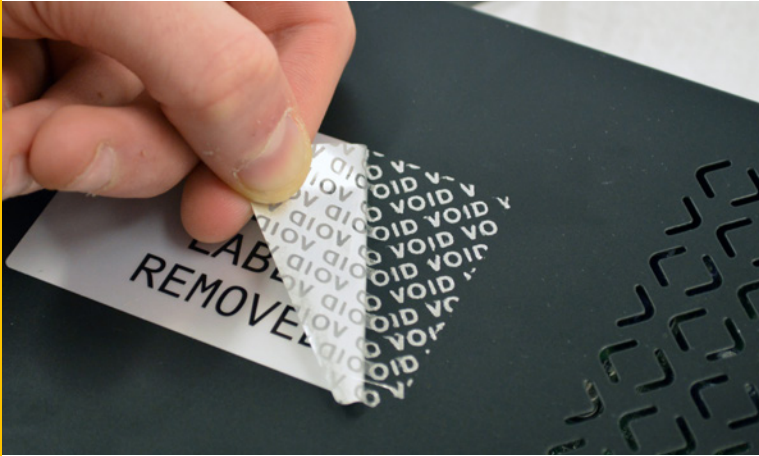


OUTDOOR
DURABILITY

Regulatory

- Reach & RoHS compliant

Counter warranty fraud, product tampering and asset theft



- Must provide evidence of tampering
- Must be irreversible



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Brady polyester B-7576

- Matt metallised polyester with a tamper indication acrylic adhesive
- High quality labels to protect against counterfeiting, diversion and tampering
- Leaves a VOID footprint on the surface when removed
- The pattern also appears on the top of the label to prevent it from being reused
- Does not allow for repositioning and requires minimal handling in order to prevent prematurely exposed VOID pattern
- Superior chemical, temperature and abrasion resistance
- Ideal to reduce liability risks due to unauthorised service, or to misuse

Performance



TAMPER-INDICATING



LOW TEMPERATURE RESISTANCE



HIGH HEAT RESISTANCE



FUEL/OIL RESISTANCE



ABRASION RESISTANCE

Regulatory

- UL 969 recognised with Brady's R6000HF ribbon
- Reach & RoHS compliant

Alternative solutions

- Destructible: B-362, B-429 & B-7351
- Checkerboard: B-438
- VOID: B-7546 & B-7566

Durably demonstrate compliance on finished goods



- Communicate core product and compliance information
- Must be durable, stay attached and remain legible on finished products

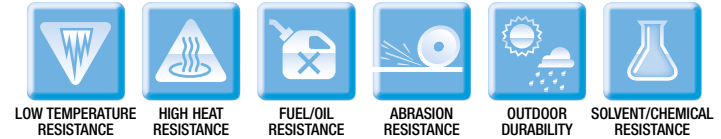


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Brady polyester B-8117

- Matt black polyester with permanent black rubber based adhesive
- Black colour is sealed inside the label construction for superior print durability versus abrasion and harsh fluids
- Excellent barcode legibility
- Aesthetically pleasing
- Specially designed R6800 white ink ribbon
- Ideal for regulatory and compliance labels on electrical components and finished goods, for component identification in automotive, for general identification and for asset tracking

Performance



Regulatory

- UL & CUL 969 recognised with Brady's R6800 ribbon, UL recognised with Brady's R4400 ribbon
- Reach & RoHS compliant

DESIGN AND PRINT YOUR OWN IDENTIFICATION SOLUTION



Design your own labels

Brady Workstation offers practical label design for a wide range of professionals. Simply select the apps you need, download the free 30-day trial and purchase when satisfied.

- design and edit custom labels
- design label templates
- lock templates for consistency
- automate label creation
- easily import data
- easily set up complex label sequences
- easily design safety & facility signs

Basic design functionalities are offered free of charge!

Design any label with the Brady Workstation apps and functionalities. Visit www.bradyeurope.com/bradyworkstation for more information.



Print your own labels

By labelling raw materials and finished goods they can be tracked accurately throughout production processes to increase production efficiency, open up new markets and attract more customers.

Brady offers industrial grade printing solutions that enable you to print the labels you need on-site. Also available are automated labelling solutions with reliable auto-apply systems, set-up, maintenance and parts support.



High volume label printing



The **BradyPrinter i7100 Industrial Label Printer** is a reliable high accuracy label printer that quickly prints a wide range of durable labels for a variety of applications including cable, printed circuit board and asset & component identification.



The **BradyPrinter i5100** offers lean, just-in-time labelling, coupled with easy label material loading and fast setup. The compact printer enables sharp printing in 300 or 600 dpi on a wide range of durable label materials.



The **BradyPrinter i3300** is an ideal printer when you need to change materials fast and frequently. It is simple, powerful and brilliantly fast with record speed label material changeovers and an impressive label lineup.



The **BBP12 Label Printer** is an entry level benchtop label printer for cable, wire and component identification that offers a high print speed and can handle a range of durable identification labels.

Automatic print & apply



The **BSP61 Print and Apply System** is designed to consistently print and accurately position and apply labels anywhere along the production line in almost all manufacturing applications.



The **ALF14 Label Feeder** automates label feeding to existing pick & place machines. Fast, efficient and easy to use, it can be implemented anywhere along the production line.

Mobile Label Printing

The **BMP71 Label Printer** is easy to carry and can print a wide range of labels, including product, cable and facility identification labels and custom designed labels.



The **BMP61 Label Printer** is portable, fast and can handle a lot of identification challenges thanks to its wireless connectivity and a wide range of durable labels to print on.



Highly customisable

Each element in the construction of a professional label can be customised to your specifications! Frequently used custom labels include specific:

- shapes and/or dimensions
- colouring: material appearance through label colouring
- materials to meet requirements: chemical resistance, UV resistance, scratch resistance
- printing or layout

Brady can leverage its identification expertise, material knowledge and R&D power if required to develop custom identification labels for your applications.



**We identify and protect people,
products and premises.**

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