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Technical data for DK Rolls

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EXPRESS LOGISTICS
FROM:
Europa International GmbH
z.Hd. Herrn Peter Müller
Musterstr. 57
61118 Bad Vilbel
Deutschland
2E/1
CONTENTS
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Extensive DK Label Tests

Like all direct thermal labels, Brother DK paper, 2-colour paper and film labels are not designed for durable, permanent labelling. However, as these tests show, Brother DK paper, 2-colour paper and film labels are an excellent solution for short-term labelling. If durable, long term labelling is required then Brother laminated P-touch tapes should be used.

Abrasion Resistance Test

Brother DK film material withstands moderate* abrasion without affecting the legibility of the text.

Brother DK paper labels protect against accidental marks and scratches, due to a special coating applied to the surface of the paper labels.

The Abrasion Test Procedure

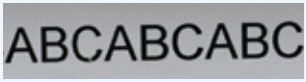
A sanding device was passed over Brother DK film, paper and 2-colour paper labels. After 50 return passes the DK film labels were completely unaffected.

The DK paper and 2-colour paper labels' print quality stayed completely unaffected, even though slight scratches appeared on the paper itself.

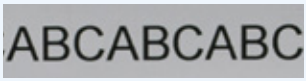
The Abrasion Test Results

Brother DK film label	●
Brother DK paper label	●
Brother DK 2-colour paper label	●

● = Almost no abrasion



DK Film



DK Paper

DK 2-colour Paper

*For exposure to heavier abrasion we recommend using Brother TZe laminated labels in one of our P-touch Labelling Machines

Extensive DK Label Tests

Temperature Resistance Test

Brother DK labels can be used in a wide range of temperatures, from freezing cold to hot environments.

The Temperature Test Procedure

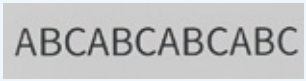
Brother DK film, paper and 2-colour paper labels were attached to stainless steel and placed in a thermostatic chamber set at 60°C, 25°C, 0°C, and -30°C, for 240 hours.

The Temperature Test Results

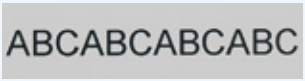
The results showed that DK film and paper labels were unaffected throughout the temperature test, whether placed in -30°C or in +60°C*.

The DK 2-colour paper labels were unaffected at temperatures ranging from -30°C to +25°C, but showed slight discolouration at +60°C.

Label	-30°C		0°C		25°C		60°C	
	Peeling	Discoloration	Peeling	Discoloration	Peeling	Discoloration	Peeling	Discoloration
DK Paper	None	None	None	None	None	None	None	None
DK Film	None	None	None	None	None	None	None	None
DK 2-colour Paper	None	None	None	None	None	None	None	Yes

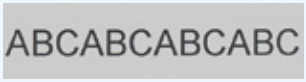


DK paper in -30°C

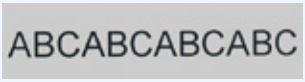


DK film in -30°C

DK 2-colour paper in -30°C



DK paper in +60°C



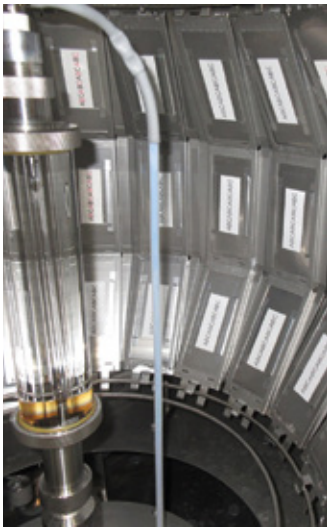
DK film in +60°C

DK 2-colour paper in +60°C

*For higher or longer exposure to temperatures, we recommend using Brother TZe laminated labels in one of our P-touch Labelling Machines

Extensive DK Label Tests

Indoor Fade Resistance Test



Brother DK film, paper and 2-colour paper labels are ideal for indoor usage.

Indoor Fade Resistance Test Procedure

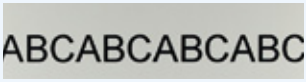
Brother DK film, paper and 2-colour paper labels were attached to a glass plate and placed inside a fade-inducing chamber at +40°C with 50% Relative Humidity.

They were left for a duration of 12 hours, equivalent to 1 year indoor fluorescent light exposure.

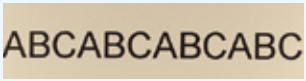
Indoor Fade Resistance Test Results

Brother DK film labels remained completely legible. DK paper and 2-colour paper labels showed some fading and discolouration.

Label	Appearance change	
	Fading of characters	Colour change of the tape base material
DK Paper	Yes	Yes
DK Film	None	None
DK 2-colour Paper	Yes	Yes



DK Film



DK Paper

DK 2-colour Paper

Extensive DK Label Tests

Outdoor Fade Resistance Test

DK labels are not the most ideal solution for long-term outdoor use. If durable, long-term labelling is required then Brother laminated TZe tapes should be used.

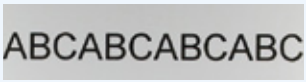
Outdoor Fade Resistance Test Procedure

Brother DK film, paper and 2-colour paper labels were attached to a glass plate and placed inside a fade-inducing chamber and left for a duration on 117 hours, equivalent to 1 month outdoor ultraviolet light exposure.

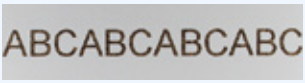
Outdoor Fade Resistance Test Results

Test results show that DK labels are not ideally suited for use outdoors for periods over one month. For these applications, we recommend the use of Brother TZe laminated labels in one of our P-touch Labelling Machines.

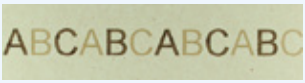
Label	Appearance change	
	Fading of characters	Colour change of the tape base material
DK Paper	Yes	Yes
DK Film	Yes	Yes
DK 2-colour Paper	Yes	Yes



DK Film



DK Paper



DK 2-colour Paper

Extensive DK Label Tests

Chemical Abrasion Test

Brother DK film, paper and 2-colour paper labels were tested for resistance to various chemicals.

Chemical Abrasion Test Procedure

Brother DK film, paper and 2-colour paper labels were affixed to a specimen table. Using a cotton cloth soaked with each solvent, the test specimens were rubbed 100 times.
This testing method complies with Japanese Standard with JIS-L-0849. (Based on ISO 105-X12: 2001, Textiles-Tests for colour fastness-Part X12: Colour fastness to rubbing (MOD)

Chemical Abrasion Test Results

Brother DK film and 2-colour paper labels remained legible when rubbed with a variety of chemicals. Should any chemicals be accidentally spilt onto the DK film labels, wiping them dry should help avoid any damage. The DK paper labels showed resistance to the majority of chemicals. If spillages of water, Sodium Hydroxide, or Hydrochloric Acid do occur, do not wipe the label, but simply let it dry.

Label	Chemical						
	Acetone	Ethyl alcohol	Olive oil	Lard	Disinfectant	Sodium Chloride/ Hydroxide (pH 5.5)	Sodium Chloride /Hydroxide (pH 8.0)
DK Paper	●	▲	●	●	▲	▲	✕
DK Film	▲	▲	●	●	▲	●	●
DK 2-colour Paper	●	▲	▲	▲	▲	▲	▲

● = Print quality unaffected
▲ = Print quality affected
✕ = Print illegible

Extensive DK Label Tests

Strong Adhesion Test

Brother DK paper and film labels are both supplied with a strong adhesive to ensure that they remain stuck to most common surfaces.

Strong Adhesion Test Procedure

To test the adhesive strength of Brother DK film and paper labels, 29mm wide labels were affixed to a variety of surfaces and left for 30 minutes.

The adhesive strength was tested by removing the label at an angle of 180 degrees. This testing method complies with Japanese Standard JIS Z 0237 (2009) testing for adhesive tape.

Strong Adhesion Test Results

Brother DK paper and film labels show the strongest adhesion to PVC, glass and stainless steel.

Surface	DK Paper	DK Film
Stainless Steel	0.78	0.40
Glass	0.80	0.47
PVC	0.86	0.50
Acrylic	0.10	0.09
Polypropylene	0.05	0.08
Cloth (Cotton + Polyester)	0.03	0.04
Leather (artificial leather)	0.27	0.15

Extensive DK Label Tests

Curved Surface Adhesion Test

Brother DK film labels are specifically designed so that the labels will stick to most cylindrical surfaces used within the laboratory and medical sectors*.

Curved Surface Adhesion Test Procedure

Brother DK film and paper labels were attached to tubes of various materials and sizes, and left at room temperature for up to 2 weeks. The labels were then checked for their ability to stay affixed to each particular surface.

Curved Surface Adhesion Test

Labels	Polypropylene tube Φ17		Acrylic tube Φ16		Stainless steel pipe Φ8	
	After 1 week	After 2 weeks	After 1 week	After 2 weeks	After 1 week	After 2 weeks
DK Paper	●	●	●	●	●	●
DK Film	●	●	●	●	●	●
DK-outer wrapping (reverse winding roll)	●	●	●	●	■	■
DK 2-colour Paper	■	■	●	■	■	■

● = No peeling of label observed

■ = Slight peeling of label observed

*For labelling curved objects with a small diameter, we recommend using Brother TZe Flexible ID laminated labels in one of our P-touch Labelling Machines

DK rolls for the QL label printer range

Wide range of labels available in paper and plastic film material, pre-sized labels or continuous rolls.

DK LABEL

DK Die-Cut Labels	Material	Colour	Size	Item No.
Standard address label (400/roll)	Paper	White	29 x 90 mm	DK-11201
Large address label (400/roll)	Paper	White	38 x 90 mm	DK-11208
Small address label (800 roll)	Paper	White	62 x 29 mm	DK-11209
Shipping label (300/roll)	Paper	White	62 x 100 mm	DK-11202
Large shipping label (180/roll)	Paper	White	103 x 164 mm	DK-11247*
Barcode label (600/roll)	Paper	White	102 x 51 mm	DK-11240*
File folder label (300/roll)	Paper	White	17 x 87 mm	DK-11203
Multi-purpose label (400/roll)	Paper	White	17 x 54 mm	DK-11204
Square label (1000/roll)	Paper	White	23 x 23 mm	DK-11221
CD/DVD label (100/roll)	Film	White	58 mm Ø	DK-11207
Round label (1200/roll)	Paper	White	12 mm Ø	DK-11219
Round label (1000/roll)	Paper	White	24 mm Ø	DK-11218
Visitor badge label (260/roll)	Paper	White	60 x 86 mm	DK-11234

DK TAPE

DK Continuous-Length Tapes - 30.48m	Material	Colour	Size	Item No.
Continuous-length	Paper	White	12 mm	DK-22214
Continuous-length	Paper	White	29 mm	DK-22210
Continuous-length	Paper	White	38 mm	DK-22225
Continuous-length	Paper	White	50 mm	DK-22223
Continuous-length	Paper, non-adhesive	White	54 mm	DK-N55224
Continuous-length	Paper	White	62 mm	DK-22205
Continuous-length	Paper, removable	White	62 mm	DK-44205
Continuous-length	Paper, removable	Yellow	62 mm	DK-44605
Continuous-length	Paper	White	103 mm	DK-22246**

DK TAPE

DK Continuous-Length Tapes - 15.24m	Material	Colour	Size	Item No.
Continuous-length	Film	White	29 mm	DK-22211
Continuous-length	Film	White	62 mm	DK-22212
Continuous-length	Film	Yellow	62 mm	DK-22606
Continuous-length	Film	Transparent	62 mm	DK-22113
Continuous-length - Black/Red print	Paper	White	62 mm	DK-22251***

*QL-1050/1050N/1060N/QL-1100/1100c/QL-1110NWB/1110NWBc. ** QL-1050/1050N/1060N require firmware update - visit http://solutions. brother.com for more information *** QL-800/810W/810Wc/820NWB/820NWBc

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1. A random sample of Brother DK tapes were selected and used to perform these tests.

2. All test results were acquired under specific conditions configured by Allion with the sole aim of providing information contained within this booklet.

3. Since tape adherence performance is affected by many variable factors, including the material the tape is attached to, the material's surface condition, whether it is greasy, dusty, rough or curved, and environmental conditions, customers should confirm adherence performance under the actual usage conditions. Products are used at the customers own risk and the findings presented in this document should not be taken as a guarantee of DK label performance in each customers' specific circumstances..

4. Brother accepts no responsibility for losses incurred as a result of reliance on information contained in this document.

Test data source: Allion Japan Inc (March 2022)

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Contact:

COOL EARTH

Brother Earth

Brother International Europe Ltd

Brother House, 1 Tame Street, Audenshaw,
Manchester M34 5JE
Tel: +44(0)161 330 6531 Fax: +44(0)161 330 5520
Website: www.brother.eu