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Technical Data Sheet
TDS No. B-580
Effective Date: 09/17/98



BRADY WORLDWIDE, INC.
Signmark® Division
P.O. Box 2999
Milwaukee, WI 53201-2999
USA
Tel. 414/228-1411
Fax 800/582-8771

BRADY B-580

Description: Brady B-580 indoor/outdoor marking film is a high gloss, durable, flexible, pressure sensitive adhesive product, designed for use in cartridge form with the Labelizer® Plus printer, LabelLite® printer, VersaPrinter™ Label and Sign Maker System, and the HandiMark™ Portable Label Maker.

Details:

Use:

Brady-580 is used for Pipemarker, Arrow Tape, Warehouse Marking, Warning Panels and Safety Signs.

Special Properties:

Permanent cold temperature applicable pressure sensitive acrylic

Substrate Type:

Vinyl film

Standard Material Colors:

White, red, yellow, green, blue, orange, black, gray, brown, gold, purple, clear.

Standard Legend Colors:

Black, white, red, green, blue, and magenta

Thickness (PSTC-33):

Total: 0.005 in. (0.125mm)

Tensile Strength (PSTC-31):

Break: 15 lb/in. (262 N/100mm)

Elongation (PSTC-31):

Break: 175%

Adhesive Properties:

Adhesion to Steel (PSTC-1)

15 Minute Dwell (Avg.) -- 75 oz/in. (82 N/100mm)

Ultimate Dwell (72 Hrs.) (Avg.) -- 115 oz/in. (127 N/100mm)

Tack (ASTM D 2979) (Avg.) -- 800 g (8 N)

Drop Shear (PSTC-7) (Avg.) -- 1 Hr.

Abrasion Resistance (Method 5306 of U.S. Federal Test Method Std. No. 191A):

CS-10 wheels, 250 g wts.

The printed legend withstands up to 250 cycles.

Substrate withstands up to 5000 cycles.

Gloss:

40 Gardner Units minimum

Minimum Application Temperature:

0°F (-18°C)

Service Temperature:

-40°F to 180°F (-40°C to 82°C)

Average Outdoor Durability:

5 years (Average expected outdoor life of product will depend on user definition of failure, climatic conditions, mounting techniques and material color.)

Chemical Resistance:

REAGENT	7 DAY IMMERSION	DIP TEST	RUB TEST
30% Sulfuric Acid	NE	NE	NE
10% Sulfuric Acid	NE	NE	NE
30% HCl	NE	NE	NE
10% HCl	NE	NE	NE
50% NaOH	NE	NE	NE
10% NaOH	F	F	NE
Methyl Ethyl Ketone	F	F	F
Acetone	F	F	F
1,1,1-Trichloroethane	F	F	F
Methanol	NE	NE	F
IPA (Isopropanol)	F	NE	NE
ASTM #3 Oil	NE	NE	NE
SAE 20 Oil	NE	NE	NE
Alconox®	NE	NE	NE
Toluene	F	F	NE
Mineral Spirits	F	NE	F
Glacial Acetic Acid	F	F	NE
5% Acetic Acid	NE	NE	F
Diesel Fuel	F	NE	NE
Heptane	F	NE	NE
Cellosolve Acetate	F	NE	NE
Conc. Ammonia	NE	F	F
10% Ammonia	NE	NE	NE
Turpentine	F	NE	NE
Kerosene	F	F	F
Water	NE	NE	NE
Gasoline	F	NE	NE
	F	F	F

NE = No Effect

NT = Not Tested

F = Failed (affected Sample)

7 Day Immersion: Immersed in reagent for 7 days.
 Dip Test: Five 10 minute dips in reagent with 30 minute recovery.
 Rub Test: Rubbed sample for 1 minute with swab soaked in reagent.

Shelf Life:

1 year when stored at 70°F (21°C) and 40% to 50% R.H.

BRADY B-580 WITH POLYESTER OVERLAMINATE

Description:

B-580 with clear 2 mil polyester overlaminate.

Substrate Type:

Vinyl film with polyester overlaminate

Thickness (PSTC-33):

Total: 0.0075 in. (0.19mm)

Tensile Strength (PSTC-31):

Break: 54 lb/in. (950 N/100mm)

Elongation (PSTC-31):

Break: 52%

Abrasion Resistance (Method 5306 of U.S. Federal Test Method Std. No. 191A):

CS-17 wheels, 1000 g wts.
 Overlaminate withstood 2500 cycles.

Gloss:

85 Gardner Units (60° gloss)

Service Temperature:

-40°F to 176°F (-40°C to 80°C)

Average Outdoor Durability:

3-5 years (Average expected outdoor life of product will depend on user definition of failure, climatic conditions, mounting techniques and material color.)

Chemical Resistance (with 2 mil polyester overlaminate):

REAGENT	7 DAY IMMERSION	DIP TEST	RUB TEST
30% Sulfuric Acid	NE	NE	NE
10% Sulfuric Acid	NE	NE	NE
30% HCl	NE	NE	NE
10% HCl	NE	NE	NE
50% NaOH	NE	NE	NE
10% NaOH	NE	NE	NE
Methyl Ethyl Ketone	F	NE	NE
Acetone	F	NE	NE

1,1,1-Trichloroethane	F	NE	NE
Methanol	NE	NE	NE
IPA (Isopropanol)	F	NE	NE
ASTM #3 Oil	NE	NE	NE
SAE 20 Oil	NE	NE	NE
Alconox®	NE	NE	NE
Toluene	F	F	NE
Mineral Spirits	F	NE	NE
Glacial Acetic Acid	F	F	NE
5% Acetic Acid	NE	NE	NE
Diesel Fuel	F	NE	NE
Heptane	F	NE	NE
Cellosolve Acetate	F	NE	NE
Conc. Ammonia	NE	NE	NE
10% Ammonia	NE	NE	NE
Turpentine	F	NE	NE
Kerosene	F	NE	NE
Water	NE	NE	NE
Gasoline	F	NE	NE

NE = No Effect

NT = Not Tested

F = Failed (affected Sample)

7 Day Immersion: Immersed in reagent for 7 days.

Dip Test: Five 10 minute dips in reagent with 30 minute recovery.

Rub Test: Rubbed sample for 1 minute with swab soaked in reagent.

Shelf Life:

1 year when stored at 70°F (21°C) and 40% to 50% R.H.

BRADY B-580 WITH POLYPROPYLENE OVERLAMINATE

Description:

B-580 with clear 2 mil polypropylene overlamine.

Substrate Type:

Vinyl film with polypropylene overlamine

Thickness (PSTC-33):

Total: 0.0075 in. (0.19mm)

Tensile Strength (PSTC-31):

Break: 35 lb/in. (610 N/100mm)

Elongation (PSTC-31):

Break: 70%

Abrasion Resistance (Method 5306 of U.S. Federal Test Method Std. No. 191A):

CS-17 wheels, 1000 g wts.

Overlamine withstood 1000 cycles.

Gloss:

75 Gardner Units (60° gloss)

Service Temperature:

-40°F to 176°F (-40°C to 80°C)

Average Outdoor Durability:

Not recommended.

Chemical Resistance (with 2 mil polypropylene overlamine):

REAGENT	7 DAY IMMERSION	DIP TEST	RUB TEST
30% Sulfuric Acid	NE	NE	NE
10% Sulfuric Acid	NE	NE	NE
30% HCl	NE	NE	NE
10% HCl	NE	NE	NE
50% NaOH	NE	NE	NE
10% NaOH	NE	NE	NE
Methyl Ethyl Ketone	F	NE	NE
Acetone	F	NE	NE
1,1,1-Trichloroethane	F	NE	NE
Methanol	NE	NE	NE
IPA (Isopropanol)	F	NE	NE
ASTM #3 Oil	NE	NE	NE
SAE 20 Oil	NE	NE	NE
Alconox®	NE	NE	NE
Toluene	F	F	NE
Mineral Spirits	F	NE	NE
Glacial Acetic Acid	F	F	NE
5% Acetic Acid	NE	NE	NE
Diesel Fuel	F	NE	NE
Heptane	F	NE	NE
Cellosolve Acetate	F	NE	NE
Conc. Ammonia	NE	NE	NE
10% Ammonia	NE	NE	NE
Turpentine	F	NE	NE
Kerosene	F	NE	NE
Water	NE	NE	NE
Gasoline	F	NE	NE

NE = No Effect

NT = Not Tested

F = Failed (affected Sample)

7 Day Immersion: Immersed in reagent for 7 days.

Dip Test: Five 10 minute dips in reagent with 30 minute recovery.

Rub Test: Rubbed sample for 1 minute with swab soaked in reagent.

Shelf Life:

1 year when stored at 70°F (21°C) and 40% to 50% R.H.

Trademarks and References:

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ASTM: American Society for Testing and Materials (U.S.A.)
PSTC: Pressure Sensitive Tape Council (U.S.A.)
SAE: Society of Automotive Engineers (U.S.A.)

All S.I. Units (metric) are mathematically derived from the U.S. Conventional Units.

Note: All values shown are averages and should not be used for specification purposes.

Test data and test results contained in this document are for general information only and shall not be relied upon by Brady customers for designs and specifications, or be relied on as meeting specified performance criteria. Customers desiring to develop specifications or performance criteria for specific product applications should contact Brady for further information.

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