BERLAC
BERLAC GROUP

ADD A TOUCH OF STYLE

Lacquers and Effects

BERLAC AG

High-quality **special and effect coatings** as well as **industrial printing inks** for decorative and functional applications made of plastic, chrome-plated and metallized substrates, carbon fiber-reiniorced materials as well as metal and glass: **our specialty for almost 100 years!**

BASLER LACKE AG

We **develop and produce** these quality products for the ski and board, sports and leisure sectors, among others, at our second Swiss site in Buchs, together with our sister company Basler Lacke AG.

Key areas:

- Coating systems for the ski and board industry
- Carbon Coating System (Composite Finishing)
- waterborne coating systems
- road and special markings

In all areas, we offer on-site technical support and training in cooperation with our sales partners.

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PRODUCT NOMENCLATURE

Basco ...	Solvent / UV - curing system
Aqua ...	Water based system
... Clear	Clearcoat
... Coat	Topcoat
... Base	Basecoat
... Print	Screen printing ink

LEGEND

SL Solvent based systems

H_2O Water based systems

UV UV -curing systems

SCREEN PRINTING

SL

BASCOPRINT 63

Chemical base: Epoxy resins
Back and top printing
2-component

Suited for pre-treated surfaces:
- ABS/TPU
- PA

Pre-treated running bases:
- PE

Available in:
- Basic Colours
- Pantone®
- Process colours
- Special Effects Colours

H_2O

AQUAPRINT 92

Chemical base: Epoxy resins
Back printing
2-component

Suited for pre-treated surfaces:
- PA

Pre-treated running bases:
- PE

Available in:
- Basic Colours

	Article No.	transparent	coloured		Hardener (mixing ratio)	Thinner	Cleaner
BascoPrint 63	63-xxxx-xxx	●	●	Std.	19-0305-000 (100:10)	–	18-0605-000
				Mod.	19-0435-000 (100:10) 19-0060-000 (100:20) 19-0360-000 (100:40)	18-0610-000 18-0616-000 18-0621-000 18-0617-000 17-0360-000	–
AquaPrint 92	92-xxxx-xxx	●	●	Std.	19-0920-000 (100:17)	Wasser 5%	18-0001-000 18-0617-000
				Mod.	–	18-0613-000	–

HARDENER • THINNER • CLEANER

19-0305-000: Hardener for BascoPrint 63, colourless

19-0330-000: Hardener, colourless for overprinting

19-0435-000: Hardener elastifying, colourless

19-0060-000 and
19-0360-000: Hardener for BascoPrint 63, amine curing

19-0920-000: Hardener, colourless

18-0610-000: BascoPrint Thinner / Cleaner, colourless free of aromatics

18-0616-000: BascoPrint Thinner, colourless for amine curing and sublimated PA film

18-0621-000: BascoPrint Retarder, colourless, free of aromatics

18-0640-000: BascoPrint Retarder extra long, colourless

17-0360-000: BascoPrint Retarder Paste, colourless

17-0640-000: BascoPrint Retarder Paste, colourless for amine curing

18-0617-000: BascoPrint Thinner, Amine Curing

18-0613-000: Retarder, colourless, free of aromatics

18-0605-000: BascoPrint Thinner/Cleaner, colourless

UV

BASCOPRINT 64

Chemical base: Acrylate
Top printing
2-component

Suited for pre-treated plastic foils

Available in:
- 64-0004-041 glossy
- 64-0010-046 mat
- 64-9xxx-xxx black
- 64-1xxx-xxx white
- 64-7xxx-xxx grey

SL

BASCOPRINT 66

Chemical base: Polymeric resins
Top printing
2-component

Suited for plastic substrates or varnished surfaces

Available in:
- 66-0050-341 glossy
- 66-0060-345 mat
- 66-0070-365 mat with rough effect
- 66-0071-362 semigloss with rough effect
- 66-0072-363 SEC "grinding wheel", colourless

	Article No.	glossy	mat		Hardener (mixing ratio)	Thinner	Cleaner
BascoPrint 64	64-0020-041 64-0012-341	●		Std.	19-0330-000 (100:10)	–	18-0605-000
	64-0010-046		●	Mod.	–	18-0060-000	–
BascoPrint 66	66-0050-341	●		Std.	19-0330-000 (100:10)	–	18-0605-000
	66-0060-345		●				
			●				
			●	Mod.	–	18-0610-000 18-0621-000 18-0640-000	18-0610-000
			●				

HARDENER • THINNER • CLEANER

19-0330-000: Hardener, colourless

18-0060-000: Reactiv thinner for UV

18-0610-000: BascoPrint Thinner, colourless

18-0621-000: BascoPrint Retarder, colourless

18-0640-000: BascoPrint Retarder extra long, colourless

18-0605-000: BascoPrint Thinner/Cleaner, colourless

MATCHING-SYSTE M

BASIC COLOURS FOR PANTONE MATCHING TO BE MIXED BASED ON OUR KRIS SYSTEM

BASIC COLOUR S

BBC - Basler Basic Colours	BascoPrint 63	AquaPrint 92
opaque white	66-1008-000	92-1000-000
mixing white	63-1000-000	–
light yellow	63-2000-000	–
medium yellow	63-2002-000	–
reddish yellow	–	–
orange	63-2003-000	–
oxyd yellow	63-2005-000	–
fire red	63-3000-000	–
scarlet red	63-3001-000	–
rosa	63-3002-000	–
ruby red	63-3003-000	–
blue	63-5001-000	–
violet	63-5002-000	–
ultramarinblue	63-5000-000	–
reddish blue	63-5003-000	–
green	63-6000-000	–
brown	63-8000-000	–
black	63-9000-000	–

TRAN SPARENT . EXTENDER

Basic Colours	BascoPrint 63	AquaPrint 92
transparent	63-0000-000	92-0000-000
verschnitt	63-0001-000	–

NOTE

Colour shades in the 63 system are directly comparable with each other, except for minor colour deviations. Proofs are unavoidable. When mixing Pantone inks, use the formulas provided.

The mixed inks, when used alone, have only moderate opacity. When mixed with each other and in combination with white, only opacity is achieved. As no heavy metal pigments are used, there are opacity problems with pure reds and yellows. These inks should be backprinted in the same way as Fluo should be printed with white. Some of the colours in the Pantone Colour Formula Guide™ can only be reproduced using fluorescent inks or transparent bases.

It should be noted that the „Pantone Matching System (PMS)“ trademark of Pantone Inc. is used worldwide as a colour system for offset printing on paper. The reproduction of these colours in screen printing is therefore not possible in all shades. The mixing instructions in the „Pantone Colour Formula Guide 1000™“ do not apply to BascoPrint screen printing inks.

Recipes for adjustment are available on request. Check shade before use. Formulations given are for printing on 90-48 mesh.

For reverse printing on film and overprinting with screen printing inks or varnishes, the appropriate hardener must be added to ensure perfect adhesion.

A precision scale with at least 0.1 g graduation and a stirrer, e.g. a pneumatic stirrer with a propeller, are required to mix the desired colour shades with the mixing inks. Small quantities up to 500 g can be mixed manually. You will also need a screen for test prints to check the shade.

CUSTOMISED

Colours are supplied to customer specification.

SPEC IAL COLOUR S

Basic Colours	BascoPrint 63
yellow high density	63-2004-000
ocher reddish	–
black high density	63-9001-000
Tinter goldyellow	10-2410-000
Tinter yellow	10-2330-000
Tinter red	10-3140-000

METALLIC. GLITTER

Basic Colours	BascoPrint 63
foil silver	63-4001-002
silver fine	63-4002-002
silver medium	63-4000-002
silver rough	63-4003-002
silver bright	63-4004-002
chrome silver	63-4005-002
glitter silver	63-4006-003
pearl white	63-4007-001

HAL FTONE COLOUR S

Basic Colours	BascoPrint 63
process-cyan	63-5100-300
process-magenta	63-3100-300
process-yellow	63-2100-300
process-black	63-9100-300
opaque white	66-1008-000

FLUO-COLOURS

The UV stability of fluo colours is not as good as normal pigmented colours.
Available on request.

ADDITIVES

10-0450-000	Defoaming agent for BascoPrint, BascoCoat 55, Dosage 0.5-5%
10-0530-000	Antifoam BascoClear/-Print, Dosage 0.2-1%
10-0531-000	Anti Bubble Agent, Dosage 0.2-1% (stir very well)
10-0080-000	Levelling agent for BascoPrint colourless, Dosage 1-3%
10-0130-000	Levelling agent for BascoPrint colourless, Dosage 1%
10-0450-000	Defoaming agent for BascoPrint, BascoCoat 55, Dosage 0.5 - 5%
10-0590-000	Levelling agent for UV coats colourless, Dosage 1-2%
17-0175-000	UV-Protection agent colourless, Add 1 -2 % to BascoClear UV

MESH-NUMBERS FOR BASCOPRINT-SYSTEMS

Mesh number (cm)	Mesh number (inch)	Mesh-opening (µm)	Tread diameter nominal (µm)	Open area (%)	Fabric thickness (µm)	Theoretical ink volume (cm^3/m^2)	Ink use (g/m^2)	Wet Thickness (µm)	Application
27 - 120	70 - 120	249	120	45.3	210	95.2	87.52	71.06	overprint, glitter printing
36 - 90	90 - 90	183	90	43.3	150.0	64.9	68.00	48.44	overprint, glitter printing
43 - 90	110 - 90	136	90	34.0	150.0	51.0	46.88	38.07	overprint, glitter and metallic printing
54 - 64	137 - 64	115	64	38.7	103.0	39.8	38.21	29.71	overprint, downhill base printing
61 - 64	156 - 64	90	64	30.1	101.0	30.4	30.43	22.69	overprint, metallic, downhill base printing
68 - 55	175 - 55	85	55	33.5	85.0	28.4	28.43	21.20	overprint, metallic
77 - 48	195 - 48	77	48	35.0	80.0	28.0	28.60	20.90	overprint, line art work, full tone, metallic
77 - 55	195 - 55	67	55	26.5	88.0	23.3	23.32	17.39	overprint, line art work, full tone, metallic
90 - 48	230 - 48	55	48	24.6	78.0	19.2	20.40	14.33	line art work, full tone, fine metallic
120 - 34	305 - 34	45	34	29.6	55.0	16.3	13.32	12.17	half-tone printing, line art work, full tone
140 - 31	355 - 31	36	31	26.0	48.0	12.5	10.21	9.33	half-tone printing, line art work, full tone
165 - 34	420 - 34	23	34	13.9	62.0	8.6	7.03	6.42	half-tone printing BascoPrint UV
180 - 31	460 - 31	22	31	15.1	43.0	6.5	5.31	4.85	half-tone printing BascoPrint UV

REMARK:
halftone-printing: process colour or pattern print
full tone: Pantone colours or TMC colours
line art works: Pantone colours, TMC colours or signs
overprint: back side prints for cover and protection

CURTAIN COATING - SPRAY COATING

SL

BASCOCLEAR 54

Chemical base: Acryl Polyurethane
Curtain coating and spray coating
2-component

Suited for plastic substrates / Metals like Aluminium, Titanal, copper, high quality steel and glass/carbon fibre.

Available in:
- 54-0005-341 glossy
- 54-0011-344 semi mat

weitere Produkte auf Anfrage

SL

BASCOCOAT 55

Chemical base: Epoxy resins
Curtain coating and spray coating
2-component

Suited for pre-treated PE (e.g. base material). Good adhesion in combination with epoxy adhesives, Prepreg and PUR.

Available in:
- white
- transparent

	Article No.	transparent	coloured	glossy	mat		Hardener (mixing ratio)	Thinner	Cleaner
BascoClear 54	54-0005-341	●		●		Std.	19-0800-000 (100:25)	–	18-0605-000
						Mod.	19-0330-000 (100:17) 19-0430-000 (100:33)	zum Spritzen: 18-0000-000 18-0120-000	–
	54-0011-344				●	Std.	19-0800-000 (100:20)	–	18-0605-000
						Mod.	19-0330-000 (100:13) 19-0435-000 (100:25)	zum Spritzen: 18-0000-000 18-0120-000	–
BascoCoat 55	55-1200-000 55-0200-000	●	●			Std.	–	–	–
						Mod.	19-0023-000 (100:33)	zum Spritzen: 18-0000-000 18-0120-000	18-0800-000

HARDENER • THINNER • CLEANER

19-0800-000: Hardener, colourless

19-0330-000: Hardener, colourless

19-0435-000: Hardener elastifying, colourless

19-0400-000: Hardener, colourless

19-0021-000: BascoCoat 55 hardener, colourless, free of aromatics

19-0023-000: BascoCoat 55 hardener, brownish, transparent

18-0000-000: Special thinner fast, colourless

18-0120-000: Special thinner standard, colourless

18-0605-000: Thinner/Cleaner, colourless

18-0800-000: Nitro thinner, colourless

CURTAIN COATING - SPRAY COATING DIGITAL PRINTIN G

H_2O

AQUACOAT 95

Chemical base: Epoxy resins
Curtain coating
2-component

Suitable for pre-treated PE (e.g. treads) and PA (sublimated surfaces). Good adhesion in combination with epoxy adhesives, prepreg and PUR foam.

Available in:
- Covering white
- transparent

UV

BASCOCLEAR 65

Chemical base: Acrylate
Curtain coating / spray application for top sheets
2-component

Suitable for surface films such as ABS/TPU, PMMA/TPU and PE. Excellent gloss and high scratch resistance.

Available in:
- 65-0000-041 glossy [1)]
- 65-0008-041 glossy
- 65-0002-045 mat
- 65-0201-041 glossy, sprayabler

	Article No.	coloured	glossy	mat		Hardener (mixing ratio)	Thinner	Cleaner
AquaCoat 95	95-10xx-xxx	●		●	Std.	19-0910-000 (100:10)	–	17-0001-000
					Mod.	–	Water max. 10%	18-0617-000
BascoClear 65	65-0000-041 65-0016-041		●		Std.	19-0330-000 (100:5)	–	18-0605-000
					Mod.	–	18-0060-000 18-0605-000	18-0610-000
	65-0008-041 65-0012-041		●		Std.	19-0330-000 (100:5)	–	18-0605-000
					Mod.	–	18-0060-000 18-0605-000	18-0610-000
	65-0002-045 (for spray application)			●	Std.	19-0330-000 (100:5)	–	18-0605-000
					Mod.	–	18-0060-000 18-0605-000	18-0610-000
	65-0201-041		●		Std.	19-0330-000 (100:10)	–	18-0605-000
					Mod.	–	18-0060-000 18-0605-000	18-0610-000

[1)] especially for white substrates

HARDENER • THINNER • CLEANER

19-0910-000: Hardener, colourless

19-0330-000: Hardener, colourless

18-0060-000: Reactiv thinner for UV

18-0605-000: Thinner/Cleaner, colourless

17-0001-000: Cleaner for Hydro-coatings, colourless

18-0607-000: Thinner, colourless

81-0000-000: AquaJet Cleaner, colourless

APPLICATION INSTRUCTION

BACK SIDE PRINTING

Screen printing system	BascoPrint 63 2C Screen printing ink Mixing ratio 100:10 mit 19-0350-000 Hardener 100:10 mit 19-0435-000 Hardener elastic 100:20 mit 19-0060-000 Hardener 100:20 mit 19-0360-000 Hardener	AquaPrint 92 2C Screen printing ink Mixing ratio 100:17 mit 19-0920-000 Hardener
Transparent foil: 	Pre-treated ABS/TPU , PE running base as well as PA qualities	Pre-treated PE treads and PA qualities
Horizontal mirrored drawing: PMS®, SEC , TMC foil back side 	Mesh size: 77-48 (195-48 inch) to 120-34 (305-34 inch) For glitter: 27-120 (70-120 inch) to 43-90 (110-90 inch) Drying time: 1-2 h at 23°C between each print	Mesh size: 77-48 (195-48 inch) to 90-48 (230-48 inch) Drying time: 2-6 h at 23°C between each print
Spot colour: PMS®, SEC , TMC 	Mesh size: 61-64 (156-64 inch) to 120-34 (305-34 inch) Drying time: 2-36 h at 23°C	Mesh size: 54-64 (137-64 inch) to 90-48 (230-48 inch) Drying time: 2-36 h at 23°C
Coverprint: white or light grey 	66-1008-000 BascoPrint 63 TMC white; 63-1000-000 BascoPrint 63 BBC white; Mixing ratio 100:10 with 19-0305-000 and 19-0435-000 Mesh size: 43-90 to 77-48	92-1010-000 AquaPrint 92 BBC white; Mixing ratio 100:5 with 19-0910-000 Mesh size: 43-90 to 77-48
Moulding 	Drying time min.: 72 hours at 23°C or 14 hours at 45 - 50°C can glue with epoxy resin, PUR -glue or injection foam	Drying time min.: 24 hours at 23°C or 14 hours at 45 - 50°C can glue with epoxy resin, PUR -glue or injection foam

See technical data sheets. These specifications are for general information only and do not replace your own tests!

TOP PRINTIN G

Screen printing system	BascoPrint 63 2C Screen printing ink Mixing ratio 100:10 mit 19-0305-000 Hardener standard 19-0435-000 Hardener elastic 19-0330-000 Hardener strongly curing
Overprint varnish, clear coat	63-0000-000 BascoPrint 63 BBC transparent; 64-xxxx-xxx BascoPrint 64 UV transparent; Mesh size: 54-90 to 120-34 54-0xx-3xx BascoClear 2C 65-00xx-04x BascoClear UV 80 - 100 g/m²
Graphic: PMS®, SEC , TMC 	Mesh size: 77-48 to 120-34 Trocknungszeit: 2-36 h. bei 23°C
Base colour 	Mesh size: 77-48 to 120-34 Glitter: 27-120 to 43-90 Drying time: 1-24 h. with 23°C
Coloured foil or composite 	GFK and Carbon-composite
Moulding 	Drying time min.: 24 hours at 23°C or 14 hours at 45 - 50°C glue with epoxy resin, PUR -glue or injection foam

See technical data sheets. These specifications are for general information only and do not replace your own tests!

COATING FOR SKI AND BOARD SURFACES

Version A	
	5. Clear coar: 80 – 90 g/m² glossy or mat 54-0005-341 BascoClear 2C/54-0011-344 65-0000-041 BascoClear UV/65-0002-045 65-0201-041 BascoClear U V / 65-0206-045 **4.** Silk sreen printing: BascoPrint 63 **3.** Intermediate sanding: after drying over night **2.** Clear coat: 80 – 90 g/m² 54-0005-341 BascoClear 2C 65-0000-041 BascoClear UV 65-0201-041 BascoClear UV Intermediate drying: 2 - 12 h **1.** Base coat: 80 – 90 g/m² BascoBase 56 Surface:: ABS, ABS-TPU, GRP composites high-pressure laminates with paper

Version B	
	4. Clear coat:80 – 90 g/m² glossy or mat 54-0005-341 BascoClear 2C/54-0011-344 65-0000-041 BascoClear UV/65-0002-045 65-0201-041 BascoClear UV/65-0206-045 **3.** Silk sreen printing: BascoPrint 63 **2.** Intermediate sanding: fine with scotch brite “fine” Intermediate drying: 12 - 24 h **1.** Base coat: 80 – 90 g/m² BascoBase 56 Surface:: ABS, ABS-TPU, GRP composites, high-pressure laminates with paper

TESTING DEVICE FOR DETERMINING THE PEEL VALUE IN N/M OF PRESSED FOILS

Test device:

- Treated aluminium panel: approximate 1 mm × 130 mm × 80 – 100 mm
- Test foil: approximate 220 - 250 mm × 80 – 100 mm
- A dhesive: Araldite AW 1136 SP or 1137 SP / Hardener HY 5049-1 100:30 to glue panel with foil
- 2 Aluminium panels size 210 × 300 mm to place in the press
- Heated press with adjustable pressure
- Conditions for moulding: 10 Min. 100°C and 12 bar
- A luminium or steel drum: diameter: 47.5 mm (100 mm is also possible), drum length: app. 86 mm with 2 slots approx. 10 mm deep 1,4 and 1 mm wide
- Water storage: min. 2h – max. 4h in cold tap water

Scope of application:
Test to determine adhesion within a readjusted ski assembly.

Device description:
The device can be used in a number of different areas, each requiring different attachments. For example, a similar attachment is used for the peeling test. The tester measures the force required to achieve de-lamination by pulling the foil away from the titanal sheet.

Peeling value calculation:
Peel force (N) = is read on the tensile testing machine
Specimen width (mm) = 20 mm

TEST PROCEDURE FOR TOP PRINTED COATINGS AND INKS

Test procedure following ISO 2409
For the so called "cross hatch" test a snap-off cutter or a multiple cutting tool with six blades is used. With this equipment minimum 6 cuts are applied. Space from cut to cut is 1mm for film weights up to 60 µm and 2mm for film weights above 60 µm - 120 µm. 3 mm above 120 µm. When the cuts are applied, brush the cuts in each direction five times or use an adhesive tape to do a peel off test.

Classifi-cation	Description	Appearance of surface of crosscut area where flaking has occurred (Sample of six parallel cuts)
CH 0	The edges of the cuts are completely smooth; none of the squares of the lattice has been damaged.	–
CH 1	Delaminating of small flakes of coating at the intersec-tions of the cuts. The damage is not exceeding 5% of the total surfacee.	
CH 2	The coating has flaked along and/or at the intersections of the cuts. A surface of the cross-cut bigger than 5 %, but not exceeding 15 % is affected.	
CH 3	The coating has flaked along the edges of the cuts parti-ally or completely in streaks, and/or has flaked in part or completely on different parts of the squares. A surface of the crosscut bigger than 15 %, but not exceeding 35 % is affected.	
CH 4	The coating has flaked along the edges of the cuts parti-ally or completely in streaks, and/or some squares have detached interely. A surface of the cross-cut bigger than 35 %, but not exceeding 65 % is affected.	
CH 5	Almost complete delaminating, with a damage exceeding the Classification CH 4	

Note: Ranking between CH 0 and CH 2 is considered to be good

Cross cut peel test according to ASTM D 3359-97

This test can be used in addition to the cross hatch test to check adhesion properties of printed coatings and inks on surfaces. To do the test, use a sharp knife (9mm blade) to apply two diagonal cuts (Fig. 1) through all layers of coating. To test adhesion, try to peel off some of the coating at the cross section (Fig. 2).

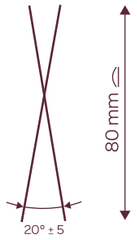

Fig. 1

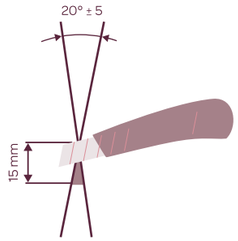

Fig. 2

Conclusion: If you can't peel off or lift the coating, adhesion is excellent. If you can peel off or lift less than 15mm of the coating, adhesion is still sufficient. In case of large areas of the coating being easily removable, adhesion is insufficient.

SPECIAL EFFECTS

INDIVIDUAL, EFFECTIVE AND SUSTAINABLE

Your idea - our solutions

We are your special effects partner. We have a wide range of SEC effects to give your products a unique look. Whether you want crystal, pearl, metallic, chrome, glitter, soft-feel, retroreflective or other effects, we have them all on our 52 and 63 screen printing systems.

Whatever you want to achieve: We are happy to help you on your individual way. It's best to ask us about development and support options before the process begins.

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Lacquers and Effects

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