



Frame File PostScript Code for 1-Minus-Relation (1MR) to *setrgbcolor*

```
01 %!PS-Adobe-3.0 EPSF-3.0, 1MR for change to setrgbcolor
02 /FFM_setrgbcolor {setrgbcolor} bind def
03 /1MR-0000 {%BEG procedure 1MR-0000
04 %1MR-Transform of setgray and setcmykcolor to FFM_setrgbcolor
05
06 /setgray {%BEG procedure setgray to setrgbcolor
07     dup dup FFM_setrgbcolor
08     } def %END procedure setgray to setrgbcolor
09
10 /setcmykcolor {%BEG procedure setcmykcolor to setrgbcolor
11     /FFM_k exch def /FFM_y exch def /FFM_m exch def /FFM_c exch def
12     FFM_k 0 eq { ( FFM_c sub 1 FFM_m sub 1 FFM_y sub FFM_setrgbcolor)
13         ( FFM_k sub dup dup FFM_setrgbcolor) ifelse
14         } def %END procedure setcmykcolor to setrgbcolor
15
16 } def %END procedure 1MR-0000
17 %trailer 1MR 1-Minus-Relation (1MR) to setrgbcolor
```

Remarks:
line 02: necessary for the revised definition of *rgb setrgbcolor*.
The *FFM_PS* file shall include line 02 before the use of 1MR-0000.
line 06 to 08: change of *w setgray* to *rgb setrgbcolor*.
line 10 to 14: change of *cmyk setcmykcolor* to *rgb setrgbcolor*.
AEB31-(1/3)N includes the procedure 1MR-0000, see AEB31-3N.

VG-PS without or with 1MR and transfer from VG-PDF to PG-eps

The following files include changes (Yes/No):

File	1MR	gamma	value	remark
AEB31-1N.PS	No	Yes	1,000	VG original
AEB31-3N.PS	Yes	Yes	1,000	VG with 1MR
AEB30-2N.eps	No	Yes	1,000	VG original -> PG
AEB30-4N.eps	Yes	Yes	1,000	VG with 1MR -> PG

```
01 %BEG PS-Code used in the files of this page AEB3
02
03 /iprocl1MR 0 def %AEB31-1N: 0 def, AEB31-3N: 1 def
04 %1MR-0000G where {pop 1MR-0000G}{1MR-0000F} ifelse
05 %iprocl1MR 1 eq {1MR-0000} if
06
07 %Used in AEB30-2N.eps, AEB31-1N.PS: No 1MR
08 %Used in AEB30-4N.eps, AEB31-3N.PS: with 1MR
09 %Used for the above files in AEB3LONA.PS
10
11 %END PS-Code used in the files of this page AEB3
```

Remarks:
lines 03 to 05: possible PS Operators (%=not used).

File transfer VG-PDF of AEB31-1N to PG-eps of AEB30-2N

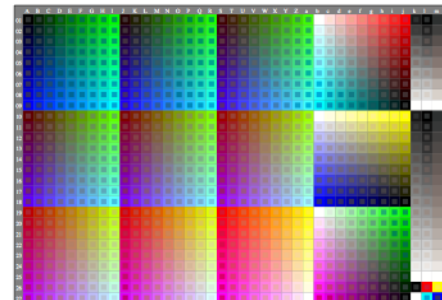
Software: *GraphicConverter V5.2 (2010)* included in Mac OSX V10.6.8.
Download of V11 (2020) with equal output, see <http://www.lcmsoft.com>.

```
01 %!PS-Adobe-3.0 EPSF-3.0
02 %%Creator: GraphicConverter V5.2.2 X
03 %%Title: AEB31-1N.eps
04 %%CreationDate: 2020-03-14
05 %%Pages: 1
06 %%BoundingBox: 0 0 168 120
07 %%EndComments
08 %%BeginProlog
09 /readstring {
10     currentfile exch readhexstring pop
11 } bind def
12 /rpicstr 350 string def
13 /gpicstr 350 string def
14 /bpicstr 350 string def
15 %%EndProlog
16 %%Page: 1 1
17 gsave
18 0 0 translate
19 168 120 scale
20 350 252 8
21 { 350 0 0 -252 0 252 }
22 { rpicstr readstring }
23 { gpicstr readstring }
24 { bpicstr readstring }
25 true 3
26 colorimage
27 %about 6600 lines deleted here
28 ...
29 %about 6600 lines deleted here
30 ...
31 %about 6600 lines deleted here
32 grestore
33 showpage
34 %%EOF
```

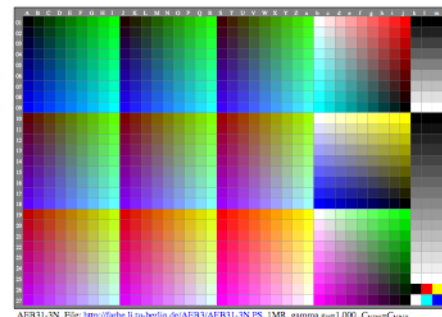
Remarks:
line 06: the original %%BoundingBox 70 85 238 206 is not used.
line 18: The original shift of the zero point is not used.
For all the original data see AEB31-4N.
lines 27 to 31: only a few of the about 6600 lines are listed here.

AEB30-7N

<http://farbe.li.tu-berlin.de/AEB3/AEB3LONA.TXT> / .PS; Frame file in VG; start output
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 1/1



AEB31-1N, File: <http://farbe.li.tu-berlin.de/AEB3/AEB31-1N.PS>, No 1MR, gamma gp=1,000, Cypg=Cy88



AEB31-3N, File: <http://farbe.li.tu-berlin.de/AEB3/AEB31-3N.PS>, 1MR, gamma gp=1,000, Cypg=Cy88

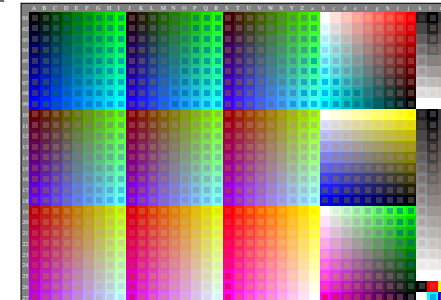
File transfer VG-PDF of AEB31-1N to PG-eps of AEB30-2N

Software: *GraphicConverter V5.2 (2010)* included in Mac OSX V10.6.8.
Download of V11 (2020) with equal output, see <http://www.lcmsoft.com>.

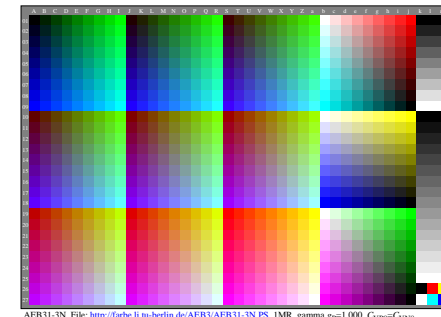
```
01 %!PS-Adobe-3.0 EPSF-3.0 %NEW NAME: AEB30-2N
02 %%Creator: GraphicConverter V5.2.2 X
03 %%Title: AEB31-1N.eps
04 %%CreationDate: 2020-03-14
05 %%Pages: 1
06 %%BoundingBox: 70 85 238 206 %<- 0 0 168 120
07 %%EndComments
08 %%BeginProlog
09 /readstring {
10     currentfile exch readhexstring pop
11 } bind def
12 /rpicstr 350 string def
13 /gpicstr 350 string def
14 /bpicstr 350 string def
15 %%EndProlog
16 %%Page: 1 1
17 gsave
18 70 85 translate %<- 0 0 translate
19 168 120 scale
20 350 252 8
21 { 350 0 0 -252 0 252 }
22 { rpicstr readstring }
23 { gpicstr readstring }
24 { bpicstr readstring }
25 true 3
26 colorimage
27 %about 6600 lines deleted here
28 ...
29 %about 6600 lines deleted here
30 ...
31 %about 6600 lines deleted here
32 grestore
33 showpage
34 %%EOF
```

Remarks:
line 06: the original %%BoundingBox 70 85 238 206 is used.
line 18: The original shift of the zero point is used.
For all the original data see AEB31-4N.
lines 27 to 31: only a few of the about 6600 lines are listed here.

AEB31-3N



AEB31-1N, File: <http://farbe.li.tu-berlin.de/AEB3/AEB31-1N.PS>, No 1MR, gamma gp=1,000, Cypg=Cy88



AEB31-3N, File: <http://farbe.li.tu-berlin.de/AEB3/AEB31-3N.PS>, 1MR, gamma gp=1,000, Cypg=Cy88

File transfer VG-PDF of AEB31-3N to PG-eps of AEB30-4N

Software: *GraphicConverter V5.2 (2010)* included in Mac OSX V10.6.8.
Download of V11 (2020) with equal output, see <http://www.lcmsoft.com>.

```
01 %!PS-Adobe-3.0 EPSF-3.0
02 %%Creator: GraphicConverter V5.2.2 X
03 %%Title: AEB31-3N.eps
04 %%CreationDate: 2020-03-14
05 %%Pages: 1
06 %%BoundingBox: 0 0 168 120
07 %%EndComments
08 %%BeginProlog
09 /readstring {
10     currentfile exch readhexstring pop
11 } bind def
12 /rpicstr 350 string def
13 /gpicstr 350 string def
14 /bpicstr 350 string def
15 %%EndProlog
16 %%Page: 1 1
17 gsave
18 0 0 translate
19 168 120 scale
20 350 252 8
21 { 350 0 0 -252 0 252 }
22 { rpicstr readstring }
23 { gpicstr readstring }
24 { bpicstr readstring }
25 true 3
26 colorimage
27 %about 6600 lines deleted here
28 ...
29 %about 6600 lines deleted here
30 ...
31 %about 6600 lines deleted here
32 grestore
33 showpage
34 %%EOF
```

Remarks:
line 06: the original %%BoundingBox 70 85 238 206 is not used.
line 18: The original shift of the zero point is not used.
For all the original data see AEB31-4N.
lines 27 to 31: only a few of the about 6600 lines are listed here.

AEB31-3N

Main content of the two coded VG-PS files AEB31-(1/3)N

Reference: Adobe Systems: *PostScript Language Reference Manual*, see <http://www.adobe.com/jp/print/postscript/pdfs/PLRM.pdf>

```
01 %!PS-Adobe-3.0 EPSF-3.0 AEB31-1N
02 %%BoundingBox: 70 85 238 206
03 ...
04 /FFM_setrgbcolor {setrgbcolor} bind def
05 /1MR-0000 {%BEG procedure 1MR-0000
06 %Transfer setgray and setcmykcolor to FFM_setrgbcolor
07 ...
08 } def %END procedure 1MR-0000
09
10 /iprocl1MR 0 def %31-1N: 0 def, 31-3N: 1 def
11 %1MR-0000G where {pop 1MR-0000G}{1MR-0000F} ifelse
12 %iprocl1MR 1 eq {1MR-0000} if
13 ...
14 73 86.5 moveto (AEB31-1N, ) show
15 %iprocl1MR 0 eq {(No 1MR) show}{(1MR) show} ifelse
16 72 90 translate
17 0.00237 MM dup scale
18 ...
19 0 setgray
20 0 0 moveto 24600 0 rlineto 0 16900 rlineto
21     -24600 0 rlineto closepath stroke
22 ...
23 /xa 600 def /ya 600 def
24 /xd 600 def /xd2 300 def /xd4 150 def
25 r g b setrgbcolor
26 xa ya xd dup rec fill
27 1 r sub 1 g sub 1 b sub 0 setcmykcolor
28 xa xd4 add ya xd4 add xd2 dup rec fill
29 ...
30 showpage
31 %%EOF
```

Remarks:
line 02: Definition of the original %%BoundingBox 70 85 238 206.
line 04 to 08: Definition of the procedure 1MR, compare AEB30-1N.
line 10 to 12: Use of 1MR for /iprocl1MR 1 def.
line 16: The original shift of the zero point is the 72 90 translate.
line 14 to 15: The text output is below the zero point of the rectangle.
line 20 to 21: Draw of the rectangle in mm reduced by a factor 0.237.
line 23 to 26: Fill of large squares with colours by *rgb setrgbcolor*.
line 27 to 28: Fill small squares with colours by *cmyk setcmykcolor*.

File transfer VG-PDF of AEB31-3N to PG-eps of AEB30-4N

Software: *GraphicConverter V5.2 (2010)* included in Mac OSX V10.6.8.
Download of V11 (2020) with equal output, see <http://www.lcmsoft.com>.

```
01 %!PS-Adobe-3.0 EPSF-3.0 %NEW NAME: AEB30-4N
02 %%Creator: GraphicConverter V5.2.2 X
03 %%Title: AEB31-3N.eps
04 %%CreationDate: 2020-03-14
05 %%Pages: 1
06 %%BoundingBox: 70 85 238 206 %<- 0 0 168 120
07 %%EndComments
08 %%BeginProlog
09 /readstring {
10     currentfile exch readhexstring pop
11 } bind def
12 /rpicstr 350 string def
13 /gpicstr 350 string def
14 /bpicstr 350 string def
15 %%EndProlog
16 %%Page: 1 1
17 gsave
18 70 85 translate %<- 0 0 translate
19 168 120 scale
20 350 252 8
21 { 350 0 0 -252 0 252 }
22 { rpicstr readstring }
23 { gpicstr readstring }
24 { bpicstr readstring }
25 true 3
26 colorimage
27 %about 6600 lines deleted here
28 ...
29 %about 6600 lines deleted here
30 ...
31 %about 6600 lines deleted here
32 grestore
33 showpage
34 %%EOF
```

Remarks:
line 06: the original %%BoundingBox 70 85 238 206 is not used.
line 18: The original shift of the zero point is used.
For all the original data see AEB31-4N.
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AEB31-3N

TUB-test chart AEB3; ; VG except PG in AEB30-(2/4)N
PostScript-output steering of test chart AE49 of ISO 9241-306

input: *w/rgb/cmyk* -> *rgb(1MR)?*
output: gamma gp = 1,000

