http://farbe.li.tu-berlin.de/AEA2/AEA2L0N1.TXT /.PS; Vector graphic (VG); start output
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 1/1

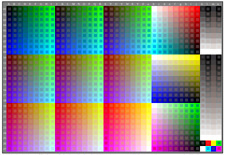
see similar files: http://farbe.li.tu-berlin.de/AEA2/AEA2.HTM
technical information: http://farbe.li.tu-berlin.de or http://130.149.60.45/~farbmetrik

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

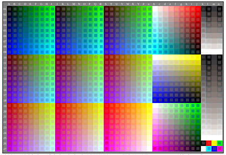
```
01 %!PS-Adobe-3.0 EPSF-3.0, 1MR for change to setrgbcolor
02 /FFM_setrgbcolor {setrgbcolor} bind def
03 /1MR-0000 {%BEG procedure 1MR-0000
04 %1MR-Transform of setgray and setcmykcolor to FFM_setrgbcolor
05
06 /setgray {%BEG procedure setgray to setrgbcolor
07           dup dup FFM_setrgbcolor
08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

Remarks:
line 02: necessary for the revised definition of *rgb setrgbcolor*.
The FF_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*.

AEA20−1N



AEA20-2N, Input file: http://farbe.li.tu-berlin.de/AEA2/AEA21-1N.EPS, No 1MR, gamma g_P=0,475, C_{YP1}



AEA21-1N, File: http://farbe.li.tu-berlin.de/AEA2/AEA21-1N.EPS, No 1MR, gamma g_P=1,000, C_{YP8}=C_{YN8}

Change of *Frame File PostScript Code* for *1-Minus-Relation (1MR)*

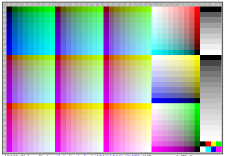
The following files include changes (Yes/No):

File	1MR	gamma	value
AEA20−2N	No	No	1,000
AEA20−4N	Yes	Yes	0,475
AEA21−1N	No	No	1,000
AEA21−3N	Yes	No	1,000
AEA2L0NP	No	No	1,000

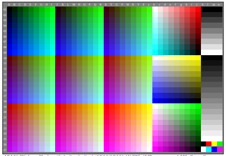
```
01 %BEG PS-Code used in the files of this page AEA2
02 1MR-0000F
03 1MR-0000G
04 /1MR-0000G where {pop 1MR-0000G}{1MR-0000F} ifelse
05
06 %The PS-Operator is not active if "%" is in front.
07
08 %Used in AEA20-2N.EPS, AEA21-1N.EPS: %02, %03, %04
09 %Used in AEA20-4N.EPS, AEA21-3N.EPS:  02, %03, %04
10 %Used in AEA2L0NP.EPS: %02, %03, %04
11 %END PS-Code used in the files of this page AEA2
```

Remarks:
lines 02 to 04: three possibilities for PS Operators (%=not used).

AEA20−3N



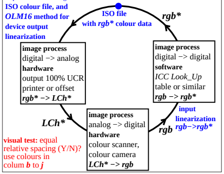
AEA20-4N, Input file: http://farbe.li.tu-berlin.de/AEA2/AEA21-1N.EPS, 1MR, gamma g_P=0,475, C_{YP1}



AEA21-3N, Input file: http://farbe.li.tu-berlin.de/AEA2/AEA21-1N.EPS, 1MR, gamma g_P=1,000, C_{YP8}=C_{YN8}

ISO colour file AE49 and loop: file –> print –> scan –> file

use 1080 colours of: http://farbe.li.tu-berlin.de/AEA4/AEA40-7N.PDF or http://standards.iso.org/iso/9241/306/ed-2/AE49/AE490-7N.PDF without 1MR.



AEA21−4N

PostScript-code used in the local files (F) for the 1-Minus-Relation (1MR)

The software *AdobeDistiller V3.0* transfers local PS-VG to the PDF-VG code.
The software *GraphicConcerter V5.2* transfers PDF-VG to the eps-PG code.

```
01 %BEG AEA2/OUTLIN1Y2 EARLY BINDING 1MR-0000F 200201
02 %BEG 1MR-0000F.TXT, 1MR & rel. gamma change 200201
03
04 /gammaFi 15 array def
05 /gammaFi %rel. gamma according to ISO 9241-306:2018
06 [0.475 0.550 0.625 0.700 0.775 0.849 0.924 1.000
07  1.081 1.176 1.290 1.428 1.600 1.818 2.105] def
08
09 /1MR-0000F {%BEG procedure 1MR-0000F
10 /FF_LM_setgrayF0 {setgray} bind def
11 /FF_LM_setrgbcolorF0 {setrgbcolor} bind def
12 /FF_LM_setcmykcolorF0 {setcmykcolor} bind def
13 /FF_LM_transferF0 {settransfer} bind def
14 /FF_LM_colortransferF0 {setcolortransfer} bind def
15 /FF_LM_xchartg_gammaF {gammaGi xchart get exp} def
16
17 /FF_LM_setrgbcolorF {%BEG FF_LM_setrgbcolorF
18 /FF_LM_b0L exch def /FF_LM_g0L exch def
19 /FF_LM_r0L exch def
20 FF_LM_r0L 0 le {/FF_LM_r0L 0.0001 def} if
21 FF_LM_g0L 0 le {/FF_LM_g0L 0.0001 def} if
22 FF_LM_b0L 0 le {/FF_LM_b0L 0.0001 def} if
23 /FF_LM_r1F FF_LM_r0L FF_LM_xchartg_gammaF def
24 /FF_LM_g1F FF_LM_g0L FF_LM_xchartg_gammaF def
25 /FF_LM_b1F FF_LM_b0L FF_LM_xchartg_gammaF def
26 FF_LM_r1F FF_LM_g1F FF_LM_b1F
27 FF_LM_setrgbcolorF0} def %END FF_LM_setrgbcolorF
28
29 /setgray {%BEG procedure setgrayF
30           dup dup FF_LM_setrgbcolorF
31          } def %END procedure setgrayF
32 %PS continuing lines 33 to 65 in file AEA20-8N.PDF
```

Remarks:
lines 09 to 15: early lokal binding of five PS color operators:
setgray, *setrgbcolor*, *setcmykcolor*, *settransfer*, *setcolortransfer*.
lines 11 to 31: early lokal binding of the PS operator *setgray*. *Setgray* is transfered to the PS operator *setrgbcolor*. The values vary with *gamma*.
The local files (F), for example AEA21−3N.EPS, use at the begin the procedure 1MR−0000F instead of 1MR−0000G within AEA2L0NA.PS.

AEA20−7N

PostScript-code used in the local files (F) for the 1-Minus-Relation (1MR)

The software *AdobeDistiller V3.0* transfers local PS-VG to the PDF-VG code.
The software *GraphicConcerter V5.2* transfers PDF-VG to the eps-PG code.

```
33 %PS previous lines 01 to 32 in file AEA20-7N.PDF
34 /setcmykcolor {%BEG procedure setcmykcolorF
35 /FF_LM_k exch def /FF_LM_y exch def
36 /FF_LM_m exch def /FF_LM_c exch def
37 FF_LM_k 0 eq {1 FF_LM_c sub 1 FF_LM_m sub
38               1 FF_LM_y sub FF_LM_setrgbcolorF}
39              {1 FF_LM_k sub dup dup
40               FF_LM_setrgbcolorF} ifelse
41 } def %END procedure setcmykcolorF
42
43 /setrgbcolor {%BEG procedure setrgbcolorF
44 /FF_LM_b exch def /FF_LM_g exch def
45 /FF_LM_r exch def
46 FF_LM_r FF_LM_g FF_LM_b
47 FF_LM_setrgbcolorF
48 } def %END procedure setrgbcolorF
49
50 /FF_LM_transferF {%BEG FF_LM_transferF
51  {FF_LM_xchartg_gammaF}
52  FF_LM_transferF0} def %END FF_LM_transferF
53 /settransfer {FF_LM_transferF} def
54
55 /FF_LM_colortransferF {%BEG FF_LM_colortransferF
56 {FF_LM_xchartg_gammaF} {FF_LM_xchartg_gammaF}
57 {FF_LM_xchartg_gammaF}
58 FF_LM_colortransferF0} def
59 %END FF_LM_colortransferF
60 /setcolortransfer {FF_LM_colortransferF} def
61 } def %END procedure 1MR-0000F
62 %END 1MR-0000F.TXT, 1MR & rel. gamma change 200201
63 %END AEA2/OUTLIN1Y2 EARLY BINDING 1MR-0000F 200201
64 %global use: 1MR-0000G, image file use: 1MR-0000F
65 /1MR-0000G where {pop 1MR-0000G}{1MR-0000F} ifelse
```

Remarks:
lines 32 to 64: early lokal binding of the other four PS color operators:
setrgbcolor, *setcmykcolor*, *settransfer*, *setcolortransfer*.
The values of all including a revised *setrgbcolor* vary with *gamma*.
line 65: If the global procedure **/1MR-0000G** is defined, then this is used.
The local files (F), for example AEA21−3N.EPS, use at the begin the procedure 1MR−0000F instead of 1MR−0000G within AEA2L0NA.PS.

AEA20−8N

PostScript-code used in the global (G) files for the 1-Minus-Relation (1MR)

The software *AdobeDistiller V3.0* transfers global PS-VG to the PDF-VG code.
The software *GraphicConcerter V5.2* transfers PDF-VG to the eps-PG code.

```
01 %BEG AEA2/OUTLIN1Y2 EARLY BINDING 1MR-0000G 200201
02 %BEG 1MR-0000G.TXT, 1MR & rel. gamma change 200201
03
04 /gammaGi 15 array def
05 /gammaGi %rel. gamma according to ISO 9241-306:2018
06 [0.475 0.550 0.625 0.700 0.775 0.849 0.924 1.000
07  1.081 1.176 1.290 1.428 1.600 1.818 2.105] def
08
09 /1MR-0000G {%BEG procedure 1MR-0000G
10 /FF_LM_setgrayG0 {setgray} bind def
11 /FF_LM_setrgbcolorG0 {setrgbcolor} bind def
12 /FF_LM_setcmykcolorG0 {setcmykcolor} bind def
13 /FF_LM_transferG0 {settransfer} bind def
14 /FF_LM_colortransferG0 {setcolortransfer} bind def
15 /FF_LM_xchartg_gammaG {gammaGi xchart get exp} def
16
17 /FF_LM_setrgbcolorG {%BEG FF_LM_setrgbcolorG
18 /FF_LM_b0L exch def /FF_LM_g0L exch def
19 /FF_LM_r0L exch def
20 FF_LM_r0L 0 le {/FF_LM_r0L 0.0001 def} if
21 FF_LM_g0L 0 le {/FF_LM_g0L 0.0001 def} if
22 FF_LM_b0L 0 le {/FF_LM_b0L 0.0001 def} if
23 /FF_LM_r1F FF_LM_r0L FF_LM_xchartg_gammaG def
24 /FF_LM_g1F FF_LM_g0L FF_LM_xchartg_gammaG def
25 /FF_LM_b1F FF_LM_b0L FF_LM_xchartg_gammaG def
26 FF_LM_r1F FF_LM_g1F FF_LM_b1F
27 FF_LM_setrgbcolorG0} def %END FF_LM_setrgbcolorG
28
29 /setgray {%BEG procedure setgrayG
30           dup dup FF_LM_setrgbcolorG
31          } def %END procedure setgrayG
32 %PS continuing lines 33 to 65 in file AEA21-8N.PDF
```

Remarks:
lines 09 to 15: early global binding of five PS color operators:
setgray, *setrgbcolor*, *setcmykcolor*, *settransfer*, *setcolortransfer*.
lines 11 to 31: early global binding of the PS operator *setgray*. *Setgray* is transfered to the PS operator *setrgbcolor*. The values vary with *gamma*.
The global (G) frame files, for example AEA2L0NA.PS, use at the begin the procedure 1MR−0000G instead of 1MR−0000F within AEA21−3N.EPS.

AEA21−7N

PostScript-code used in the global (G) files for the 1-Minus-Relation (1MR)

The software *AdobeDistiller V3.0* transfers global PS-VG to the PDF-VG code.
The software *GraphicConcerter V5.2* transfers PDF-VG to the eps-PG code.

```
33 %PS previous lines 01 to 32 in file AEA21-7N.PDF
34 /setcmykcolor {%BEG procedure setcmykcolorG
35 /FF_LM_k exch def /FF_LM_y exch def
36 /FF_LM_m exch def /FF_LM_c exch def
37 FF_LM_k 0 eq {1 FF_LM_c sub 1 FF_LM_m sub
38               1 FF_LM_y sub FF_LM_setrgbcolorG}
39              {1 FF_LM_k sub dup dup
40               FF_LM_setrgbcolorG} ifelse
41 } def %END procedure setcmykcolorG
42
43 /setrgbcolor {%BEG procedure setrgbcolorG
44 /FF_LM_b exch def /FF_LM_g exch def
45 /FF_LM_r exch def
46 FF_LM_r FF_LM_g FF_LM_b
47 FF_LM_setrgbcolorG
48 } def %END procedure setrgbcolorG
49
50 /FF_LM_transferG {%BEG FF_LM_transferG
51  {FF_LM_xchartg_gammaG}
52  FF_LM_transferG0} def %END FF_LM_transferG
53 /settransfer {FF_LM_transferG} def
54
55 /FF_LM_colortransferG {%BEG FF_LM_colortransferG
56 {FF_LM_xchartg_gammaG} {FF_LM_xchartg_gammaG}
57 {FF_LM_xchartg_gammaG}
58 FF_LM_colortransferG0} def
59 %END FF_LM_colortransferG
60 /setcolortransfer {FF_LM_colortransferG} def
61 } def %END procedure 1MR-0000G
62 %END 1MR-0000G.TXT, 1MR & rel. gamma change 200201
63 %END AEA2/OUTLIN1Y2 EARLY BINDING 1MR-0000G 200201
64 %global use: 1MR-0000G, image file use: 1MR-0000F
65 /1MR-0000G where {pop 1MR-0000G}{1MR-0000F} ifelse
```

Remarks:
lines 32 to 64: early global binding of the other four PS color operators:
setrgbcolor, *setcmykcolor*, *settransfer*, *setcolortransfer*.
The values of all including a revised *setrgbcolor* vary with *gamma*.
line 65: If the global procedure **/1MR-0000G** is defined, then this is used.
The global (G) frame files, for example AEA2L0NA.PS, use at the begin the procedure 1MR−0000G instead of 1MR−0000F within AEA21−3N.EPS.

AEA21−8N

TUB registration: 20200201-AEA2/AEA2L0N1.TXT /.PS
application for evaluation and measurement of display or print output
TUB material: code=rha4ta

TUB-test chart AEA2; Vector graphic (VG) of all figures
PostScript-output steering of test chart AE49 of ISO 9241-306

input: *w/rgb/cmyk* −> *rgb(1MR)?*
output: 0,475 < gamma g_P < 1,000