

www.ps-bam.de/LE42/LE42E00N1.PS/TXT; start output  
 N: No Band Linearization (OL) data in File (F), Startup (S) or Device (D)

| 5 steps of grey series<br>black - white (N - W)                     | Colour space, colour space coordinates and PostScript operator<br>calculations according to ISO/IEC 15775:1999-12 |                                         |                                         |                                     |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|-------------------------------------|
| Linear mixture between<br>black and white<br>in CIELAB colour space | L* CIE<br>$w^* = L^*$<br>setgray                                                                                  | CMYN (CMYK)<br>$000n^*$<br>setcmykcolor | CMYN (CMYK)<br>$cmy0^*$<br>setcmykcolor | OLV (RGB)<br>$www^*$<br>setrgbcolor |
| 1,00 N + 0,00 W (black N)                                           | 0,00                                                                                                              | 0,00 0,00 0,00 1,00                     | 1,00 1,00 1,00 0,00                     | 0,00 0,00 0,00                      |
| 0,75 N + 0,25 W                                                     | 0,25                                                                                                              | 0,00 0,00 0,00 0,75                     | 0,75 0,75 0,75 0,00                     | 0,25 0,25 0,25                      |
| 0,50 N + 0,50 W                                                     | 0,50                                                                                                              | 0,00 0,00 0,00 0,50                     | 0,50 0,50 0,50 0,00                     | 0,50 0,50 0,50                      |
| 0,25 N + 0,75 W                                                     | 0,75                                                                                                              | 0,00 0,00 0,00 0,25                     | 0,25 0,25 0,25 0,00                     | 0,75 0,75 0,75                      |
| 0,00 N + 1,00 W (white W)                                           | 1,00                                                                                                              | 0,00 0,00 0,00 0,00                     | 0,00 0,00 0,00 0,00                     | 1,00 1,00 1,00                      |

LE420-1, colorimetric relationship of  $w^*, 000n^*, cmy0^*, www^*$  for a 5 step scale: black - white

| 5 steps of colour series<br>black - white (N - W)                   | Colour space, colour space coordinates and PostScript operator<br>calculations according to ISO/IEC 15775:1999-12 |                                                              |                                                        |  |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------|--|
| Linear mixture between<br>black and white<br>in CIELAB colour space | CIELAB<br>$LAB^*$ (absolute)<br>$LAB^*$ setcolor                                                                  | CMYN (CMYK)<br>$lab^*cmy0 = cmy0^*$<br>$cmy0^*$ setcmykcolor | OLV (RGB)<br>$lab^*olv = olv^*$<br>$olv^*$ setrgbcolor |  |
| 1,00 N + 0,00 W (black N)                                           | 18.01 0.50 -0.40                                                                                                  | 1,00 1,00 1,00 0,00                                          | 0,00 0,00 0,00                                         |  |
| 0,75 N + 0,25 W                                                     | 37.35 0.10 0.80                                                                                                   | 0,75 0,75 0,75 0,00                                          | 0,25 0,25 0,25                                         |  |
| 0,50 N + 0,50 W                                                     | 56.70 -0.10 2.10                                                                                                  | 0,50 0,50 0,50 0,00                                          | 0,50 0,50 0,50                                         |  |
| 0,25 N + 0,75 W                                                     | 76.05 -0.50 -3.40                                                                                                 | 0,25 0,25 0,25 0,00                                          | 0,75 0,75 0,75                                         |  |
| 0,00 N + 1,00 W (white W)                                           | 95.41 -0.98 4.76                                                                                                  | 0,00 0,00 0,00 0,00                                          | 1,00 1,00 1,00                                         |  |

LE420-3, colorimetric relationship of  $LAB^*, cmy0^*, olv^*$  for a 5 step scale: black - white

| 5 steps of colour series<br>black - white (N - W)                   | Colour space, colour space coordinates and PostScript operator<br>calculations according to ISO/IEC 15775:1999-12 |                                                                  |                                                              |  |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------|--|
| Linear mixture between<br>black and white<br>in CIELAB colour space | CIELAB absolute<br>$LAB^*a$ (adapted)<br>$LAB^*a$ setcolor                                                        | CIELAB relative<br>$lab^*cmy0 = cmy0^*$<br>$cmy0^*$ setcmykcolor | CIELAB relative<br>$lab^*olv = olv^*$<br>$olv^*$ setrgbcolor |  |
| 1,00 N + 0,00 W (black N)                                           | 18.01 0.00 0.00                                                                                                   | 1,00 1,00 1,00 0,00                                              | 0,00 0,00 0,00                                               |  |
| 0,75 N + 0,25 W                                                     | 37.35 0.00 0.00                                                                                                   | 0,75 0,75 0,75 0,00                                              | 0,25 0,25 0,25                                               |  |
| 0,50 N + 0,50 W                                                     | 56.70 0.00 0.00                                                                                                   | 0,50 0,50 0,50 0,00                                              | 0,50 0,50 0,50                                               |  |
| 0,25 N + 0,75 W                                                     | 76.05 0.00 0.00                                                                                                   | 0,25 0,25 0,25 0,00                                              | 0,75 0,75 0,75                                               |  |
| 0,00 N + 1,00 W (white W)                                           | 95.41 0.00 0.00                                                                                                   | 0,00 0,00 0,00 0,00                                              | 1,00 1,00 1,00                                               |  |

LE420-5, colorimetric relationship of  $LAB^*a, cmy0^*, olv^*$  for a 5 step scale: black - white

| 5 steps of colour series<br>black - white (N - W)                   | Colour space, colour space coordinates and PostScript operator<br>calculations according to ISO/IEC 15775:1999-12 |                                                           |                                                           |  |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|--|
| Linear mixture between<br>black and white<br>in CIELAB colour space | CIELAB adapted<br>$LAB^*a$ (adapted)<br>$LAB^*a$ setcolor                                                         | CIELAB relative<br>$lab^*tch = tch^*$<br>$tch^*$ setcolor | CIELAB relative<br>$lab^*nce = nce^*$<br>$nce^*$ setcolor |  |
| 1,00 N + 0,00 W (black N)                                           | 18.01 0.00 0.00                                                                                                   | 0,00 0,00 -                                               | 1,00 0,00 -                                               |  |
| 0,75 N + 0,25 W                                                     | 37.35 0.00 0.00                                                                                                   | 0,25 0,00 -                                               | 0,75 0,00 -                                               |  |
| 0,50 N + 0,50 W                                                     | 56.70 0.00 0.00                                                                                                   | 0,50 0,00 -                                               | 0,50 0,00 -                                               |  |
| 0,25 N + 0,75 W                                                     | 76.05 0.00 0.00                                                                                                   | 0,75 0,00 -                                               | 0,25 0,00 -                                               |  |
| 0,00 N + 1,00 W (white W)                                           | 95.41 0.00 0.00                                                                                                   | 1,00 0,00 -                                               | 0,00 0,00 -                                               |  |

LE420-7, colorimetric relationship of  $LAB^*a, tch^*, nce^*$  for a 5 step scale: black - white

BAM-tech chart no. LE42; colour transfer and workflow  
 Double cone, hue planes and colorimetric coordinates

| 5 steps of colour series<br>cyan blue - white (C - W)                   | Colour space, colour space coordinates and PostScript operator<br>calculations according to ISO/IEC 15775:1999-12 |                                                                  |                                                              |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------|
| Linear mixture between<br>cyan blue and white<br>in CIELAB colour space | CIELAB absolute<br>$LAB^*LAB = LAB^*$<br>$LAB^*$ setcolor                                                         | CIELAB relative<br>$lab^*cmy0 = cmy0^*$<br>$cmy0^*$ setcmykcolor | CIELAB relative<br>$lab^*olv = olv^*$<br>$olv^*$ setrgbcolor |
| 1,00 C + 0,00 W (cyan blue C)                                           | 58.62 -30.62 -42.74                                                                                               | 1,00 0,00 0,00 0,00                                              | 0,00 1,00 1,00                                               |
| 0,75 C + 0,25 W                                                         | 67.82 -23.21 -30.86                                                                                               | 0,75 0,00 0,00 0,00                                              | 0,25 1,00 1,00                                               |
| 0,50 C + 0,50 W                                                         | 77.02 -15.80 -18.98                                                                                               | 0,50 0,00 0,00 0,00                                              | 0,50 1,00 1,00                                               |
| 0,25 C + 0,75 W                                                         | 86.21 -8.39 -7.11                                                                                                 | 0,25 0,00 0,00 0,00                                              | 0,75 1,00 1,00                                               |
| 0,00 C + 1,00 W (white W)                                               | 95.41 -0.98 4.76                                                                                                  | 0,00 0,00 0,00 0,00                                              | 1,00 1,00 1,00                                               |

LE421-1, colorimetric relationship of  $LAB^*a, cmy0^*, olv^*$  for a 5 step scale: cyan blue - white

| 5 steps of colour series<br>cyan blue - white (C - W)                   | Colour space, colour space coordinates and PostScript operator<br>calculations according to ISO/IEC 15775:1999-12 |                                                           |                                                           |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|
| Linear mixture between<br>cyan blue and white<br>in CIELAB colour space | CIELAB adapted<br>$LAB^*LABa = LAB^*a$<br>$LAB^*a$ setcolor                                                       | CIELAB relative<br>$lab^*tch = tch^*$<br>$tch^*$ setcolor | CIELAB relative<br>$lab^*nce = nce^*$<br>$nce^*$ setcolor |
| 1,00 C + 0,00 W (cyan blue C)                                           | 58.62 -30.34 -45.01                                                                                               | 0.500 1.000 0.656                                         | 0.000 1.000 g21b                                          |
| 0,75 C + 0,25 W                                                         | 67.82 -22.75 -33.75                                                                                               | 0.625 0.750 0.656                                         | 0.000 0.750 g21b                                          |
| 0,50 C + 0,50 W                                                         | 77.02 -15.17 -22.50                                                                                               | 0.750 0.500 0.656                                         | 0.000 0.500 g21b                                          |
| 0,25 C + 0,75 W                                                         | 86.21 -7.58 -11.25                                                                                                | 0.875 0.250 0.656                                         | 0.000 0.250 g21b                                          |
| 0,00 C + 1,00 W (white W)                                               | 95.41 0.01 -                                                                                                      | 1.000 0.001 -                                             | 0.000 0.001 -                                             |

LE421-3, colorimetric relationship of  $LAB^*a, tch^*, nce^*$  for a 5 step scale: cyan blue - white

| 5 steps of colour series<br>cyan blue - white (C - W)                   | Colour space, colour space coordinates and PostScript operator<br>calculations according to ISO/IEC 15775:1999-12 |                                                           |                                                           |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|
| Linear mixture between<br>cyan blue and white<br>in CIELAB colour space | CIELAB absolute<br>$LAB^*LCHa = LCH^*a$<br>$LCH^*a$ setcolor                                                      | CIELAB relative<br>$lab^*tch = tch^*$<br>$tch^*$ setcolor | CIELAB relative<br>$lab^*nce = nce^*$<br>$nce^*$ setcolor |
| 1,00 C + 0,00 W (cyan blue C)                                           | 58.62 54.29 236.0                                                                                                 | 0.500 1.000 0.656                                         | 0.000 1.000 g21b                                          |
| 0,75 C + 0,25 W                                                         | 67.82 40.51 236.0                                                                                                 | 0.625 0.750 0.656                                         | 0.000 0.750 g21b                                          |
| 0,50 C + 0,50 W                                                         | 77.02 27.14 236.0                                                                                                 | 0.750 0.500 0.656                                         | 0.000 0.500 g21b                                          |
| 0,25 C + 0,75 W                                                         | 86.21 13.57 236.0                                                                                                 | 0.875 0.250 0.656                                         | 0.000 0.250 g21b                                          |
| 0,00 C + 1,00 W (white W)                                               | 95.41 0.01 -                                                                                                      | 1.000 0.001 -                                             | 0.000 0.001 -                                             |

LE421-5, colorimetric relationship of  $LCH^*a, tch^*, nce^*$  for a 5 step scale: cyan blue - white

| 5 steps of colour series<br>cyan blue - white (C - W)                   | Colour space, colour space coordinates and PostScript operator<br>calculations according to ISO/IEC 15775:1999-12 |                                                           |                                                           |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|
| Linear mixture between<br>cyan blue and white<br>in CIELAB colour space | CIELAB absolute<br>$LAB^*LCHa = LCH^*a$<br>$LCH^*a$ setcolor                                                      | CIELAB relative<br>$lab^*tch = tch^*$<br>$tch^*$ setcolor | CIELAB relative<br>$lab^*nce = nce^*$<br>$nce^*$ setcolor |
| 1,00 C + 0,00 W (cyan blue C)                                           | 58.62 54.29 236.0                                                                                                 | 0.500 1.000 0.656                                         | 0.000 1.000 g21b                                          |
| 0,75 C + 0,25 W                                                         | 67.82 40.51 236.0                                                                                                 | 0.625 0.750 0.656                                         | 0.000 0.750 g21b                                          |
| 0,50 C + 0,50 W                                                         | 77.02 27.14 236.0                                                                                                 | 0.750 0.500 0.656                                         | 0.000 0.500 g21b                                          |
| 0,25 C + 0,75 W                                                         | 86.21 13.57 236.0                                                                                                 | 0.875 0.250 0.656                                         | 0.000 0.250 g21b                                          |
| 0,00 C + 1,00 W (white W)                                               | 95.41 0.01 -                                                                                                      | 1.000 0.001 -                                             | 0.000 0.001 -                                             |

LE421-7, colorimetric relationship of  $LCH^*a, tch^*, nce^*$  for a 5 step scale: cyan blue - white

input:  $cmy0^*$  setcmykcolor  
 output: no change compared to input