

# The **mboxfill** package\*

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## 1 User Interface

\mboxfill This package implements the command

\mboxfill[*width*][*leader-type*]{*pattern*}

filling a free horizontal space with *pattern*.

The *width* parameter specifies a width of box pattern to be used as leaders. If it is omitted, the pattern width is used. The \width, \height, \depth, and \totalheight macros can be used in this parameter. Length expressions are also allowed if the calc package is loaded.

The *leader-type* parameter specifies a type of leaders to be used: c means \leaders, x means \xleaders, and empty value (default) means \leaders. Depending on type, an extra space is distributed between fill entries as follows: in c case, fill entries are centered, in x case, fill entries are uniformly distributed, and in other cases, fill entries are aligned to the multiple of their width counted from the left boundary of filled box.

When the specified *width* differs from the pattern width, the pattern is centered inside the box to fill with. As a consequence, when x-leaders are used, a bit of space will be left from both sides of fill area. To remove this space, use the special value of *leader-type* parameter, namely s.

Example:

```
\noindent\mboxfill{*\}\mbox{}\\
\mbox{}{\mboxfill[2\width]{+}\mbox{}}\\
\mbox{}{\mboxfill[2\width]{\hfill+}\mbox{}}\\
\mbox{}{\mboxfill[2\width]{+\hfill}\mbox{}}\\
A text\mboxfill[1.5\width]{*\}\mbox{}\\
\mbox{}{\mboxfill[1.5\width]{*\}\mbox{}}\\
\mbox{}{\mboxfill[1.5\width]{c}{*\}\mbox{}}\\
\mbox{}{\mboxfill[1.5\width]{x}{*\}\mbox{}}\\
\mbox{}{\mboxfill[1.5\width]{s}{*\}\mbox{}}\\
\mbox{}{\hrulefill}
```

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It produces the following:

## 2 The Implementation

```
1 \newcommand*\mboxfill[1][\width]{%
2   \def\@tempa{\setlength\@tempdima{#1}}%
3   \@ifnextchar[\NCC@mboxfill]{\NCC@mboxfill[]}{%
4     \begin{#1}\hbox{#2}\end{#1}%
5   }%
6   \def\NCC@mboxfill[#1]{\hbox{#1}}%
7 }
```

Set the required box width in \tempdima:

8 \atempa

Test the case of **s**-leaders. They work like **x**-leaders, but a special kern is added to both sides of the fill area to compensate extra-space added in the box.

```

9 \edef\@tempa{\#1}\def\@tempb{s}%
10 \ifx\@tempa\@tempb
11   \@tempdima\width
12   \advance\@tempdima -\@tempdima
13   \let\@tempa\xleaders
14   \def\@tempb{\kern.5\@tempdima}%
15 \else

```

Other cases: if leader-type is incorrect, we use \leaders.

```
16     \@ifundefined{\#1leaders}{\let\@tempa\leaders}{%
17     \def\@tempa{\csname#1leaders\endcsname}%
18     \let\@tempb\empty
19 }fi
```

\@tempa contains required leaders, \@tempb is a kern or empty. Fill the space.

```
20     \leavevmode\@tempb\@tempa
21     \hb@xt@0\@tempdima{\hss\unhbox\@tempboxa\hss}\hfill\@tempb
22 \end{array}
23 }
24 </package>
```