

L'extension amssymb^{*}

American Mathematical Society

14/01/2013

1 Introduction

Ce fichier définit tous les symboles trouvés dans les polices de symboles de l'AMS : `msam` et `msbm`.

2 Implémentation

Le fichier fournit tout d'abord l'indentification de l'extension.

```
1 \NeedsTeXFormat{LaTeX2e}% LaTeX 2.09 can't be used (nor non-LaTeX)
2 [1994/12/01]% LaTeX date must be December 1994 or later
3 \ProvidesPackage{amssymb}[2013/01/14 v3.01 AMS font symbols]
```

Voir la documentation de l'extension `amsfonts` pour une discussion de l'obsolescence de l'option `psamfonts`.

```
4 \DeclareOption{psamfonts}{\PassOptionsToPackage{psamfonts}{amsfonts}}
```

Traitement des options.

```
5 \ProcessOptions\relax
```

Nous faisons appel à l'extension `amsfonts` pour faire toute la configuration des polices dont nous avons besoin.

```
6 \RequirePackage{amsfonts}[1995/01/01]
```

Un message d'avertissement en cas de chargement de l'extension `stix`¹.

```
7 \@ifpackageloaded{stix}{%
8   \PackageWarningNoLine{amssymb}{The 'amssymb' package is redundant when
9     you are using the 'stix' package, so I'm not going to load amssymb}
10  \endinput
11 }{}
```

^{*}Ce fichier a pour numéro de version 3.01 et a été mis à jour le 14/01/2013. Son titre original est « *The amssymb package* ».

1. N.D.T. : ce message indique : « L'extension 'amssymb' est redondante quand vous utilisez l'extension 'stix', aussi je ne vais pas charger 'amssymb' ».

Nous annulons quelques définitions de symboles qui ont pu être définis par l'extension `amsfonts` ✖ (q.v.) ✖; sinon `\DeclareMathSymbol` génère quelques messages d'erreur (tous ces noms de symboles sont redéfinis avec `\let` par rapport au premier défini; de cette manière, si les codes sous-jacents changent, seul un changement est à faire ici.

```
12 \let\square\relax \let\rightrightarrowsquare \let\lozenge\square
13 \let\vartriangleright\square \let\vartriangleleft\square
14 \let\trianglerighteq\square \let\trianglelefteq\square
```

Changement de code de catégorie de la ✖ **double quote** ✖ pour faire en sorte qu'elle ne soit pas active (ce qui était un problème quand des extensions comme `german` étaient utilisées). Ceci implique que les affectations avec `\let` doivent être rendues globales.

```
15 \begingroup \catcode'\="12
```

Maintenant, nous définissons l'ensemble de tous les noms de symboles standards pour les polices `msam` et `msbm`. Les redéfinitions de symboles ou les commandes qui ne peuvent être définies par le biais de `\DeclareMathSymbol` sont déjà traitées dans l'extension `amsfonts` (par exemple `\yen` ou `\widehat`).

```
16 \DeclareMathSymbol{\boxdot} {\mathbin}{AMSa}{"00}
17 \DeclareMathSymbol{\boxplus} {\mathbin}{AMSa}{"01}
18 \DeclareMathSymbol{\boxtimes} {\mathbin}{AMSa}{"02}
19 \DeclareMathSymbol{\square} {\mathord}{AMSa}{"03}
20 \DeclareMathSymbol{\blacksquare} {\mathord}{AMSa}{"04}
21 \DeclareMathSymbol{\centerdot} {\mathbin}{AMSa}{"05}
22 \DeclareMathSymbol{\lozenge} {\mathord}{AMSa}{"06}
23 \DeclareMathSymbol{\blacklozenge} {\mathord}{AMSa}{"07}
24 \DeclareMathSymbol{\circlearrowright} {\mathrel}{AMSa}{"08}
25 \DeclareMathSymbol{\circlearrowleft} {\mathrel}{AMSa}{"09}
26 %% In amsfonts.sty:
27 %%\DeclareMathSymbol{\rightleftharpoons}{\mathrel}{AMSa}{"0A}
28 \DeclareMathSymbol{\leftrightharpoons} {\mathrel}{AMSa}{"0B}
29 \DeclareMathSymbol{\boxminus} {\mathbin}{AMSa}{"0C}
30 \DeclareMathSymbol{\Vdash} {\mathrel}{AMSa}{"0D}
31 \DeclareMathSymbol{\Vvdash} {\mathrel}{AMSa}{"0E}
32 \DeclareMathSymbol{\vDash} {\mathrel}{AMSa}{"0F}
33 \DeclareMathSymbol{\twoheadrightarrow} {\mathrel}{AMSa}{"10}
34 \DeclareMathSymbol{\twoheadleftarrow} {\mathrel}{AMSa}{"11}
35 \DeclareMathSymbol{\leftleftarrows} {\mathrel}{AMSa}{"12}
36 \DeclareMathSymbol{\rightrightarrows} {\mathrel}{AMSa}{"13}
37 \DeclareMathSymbol{\upuparrows} {\mathrel}{AMSa}{"14}
38 \DeclareMathSymbol{\downdownarrows} {\mathrel}{AMSa}{"15}
39 \DeclareMathSymbol{\upharpoonright} {\mathrel}{AMSa}{"16}
40 \global\let\restriction\upharpoonright
41 \DeclareMathSymbol{\downharpoonright} {\mathrel}{AMSa}{"17}
42 \DeclareMathSymbol{\upharpoonleft} {\mathrel}{AMSa}{"18}
43 \DeclareMathSymbol{\downharpoonleft} {\mathrel}{AMSa}{"19}
44 \DeclareMathSymbol{\rightarrowtail} {\mathrel}{AMSa}{"1A}
45 \DeclareMathSymbol{\leftarrowtail} {\mathrel}{AMSa}{"1B}
```

```

46 \DeclareMathSymbol{\leftrightharpoons}{\mathrel}{AMSA}{"1C}
47 \DeclareMathSymbol{\rightleftarrows}{\mathrel}{AMSA}{"1D}
48 \DeclareMathSymbol{\Lsh}{\mathrel}{AMSA}{"1E}
49 \DeclareMathSymbol{\Rsh}{\mathrel}{AMSA}{"1F}
50 \DeclareMathSymbol{\rightsquigarrow}{\mathrel}{AMSA}{"20}
51 \DeclareMathSymbol{\leftrightsquigarrow}{\mathrel}{AMSA}{"21}
52 \DeclareMathSymbol{\looparrowleft}{\mathrel}{AMSA}{"22}
53 \DeclareMathSymbol{\looparrowright}{\mathrel}{AMSA}{"23}
54 \DeclareMathSymbol{\circeq}{\mathrel}{AMSA}{"24}
55 \DeclareMathSymbol{\succsim}{\mathrel}{AMSA}{"25}
56 \DeclareMathSymbol{\gtrsim}{\mathrel}{AMSA}{"26}
57 \DeclareMathSymbol{\gtrapprox}{\mathrel}{AMSA}{"27}
58 \DeclareMathSymbol{\multimap}{\mathrel}{AMSA}{"28}
59 \DeclareMathSymbol{\therefore}{\mathrel}{AMSA}{"29}
60 \DeclareMathSymbol{\because}{\mathrel}{AMSA}{"2A}
61 \DeclareMathSymbol{\doteqdot}{\mathrel}{AMSA}{"2B}
62 \global\let\Doteq\doteqdot
63 \DeclareMathSymbol{\triangleq}{\mathrel}{AMSA}{"2C}
64 \DeclareMathSymbol{\precsim}{\mathrel}{AMSA}{"2D}
65 \DeclareMathSymbol{\lessim}{\mathrel}{AMSA}{"2E}
66 \DeclareMathSymbol{\lessapprox}{\mathrel}{AMSA}{"2F}
67 \DeclareMathSymbol{\eqslantless}{\mathrel}{AMSA}{"30}
68 \DeclareMathSymbol{\eqslantgtr}{\mathrel}{AMSA}{"31}
69 \DeclareMathSymbol{\curlyeqprec}{\mathrel}{AMSA}{"32}
70 \DeclareMathSymbol{\curlyeqsucc}{\mathrel}{AMSA}{"33}
71 \DeclareMathSymbol{\preccurlyeq}{\mathrel}{AMSA}{"34}
72 \DeclareMathSymbol{\leqq}{\mathrel}{AMSA}{"35}
73 \DeclareMathSymbol{\leqslant}{\mathrel}{AMSA}{"36}
74 \DeclareMathSymbol{\lessgtr}{\mathrel}{AMSA}{"37}
75 \DeclareMathSymbol{\backprime}{\mathord}{AMSA}{"38}
76 \DeclareMathSymbol{\risingdotseq}{\mathrel}{AMSA}{"3A}
77 \DeclareMathSymbol{\fallingdotseq}{\mathrel}{AMSA}{"3B}
78 \DeclareMathSymbol{\succcurlyeq}{\mathrel}{AMSA}{"3C}
79 \DeclareMathSymbol{\geqq}{\mathrel}{AMSA}{"3D}
80 \DeclareMathSymbol{\geqslant}{\mathrel}{AMSA}{"3E}
81 \DeclareMathSymbol{\gtrless}{\mathrel}{AMSA}{"3F}
82 %% in amsfonts.sty
83 %% \DeclareMathSymbol{\sqsubset}{\mathrel}{AMSA}{"40}
84 %% \DeclareMathSymbol{\sqsupset}{\mathrel}{AMSA}{"41}
85 \DeclareMathSymbol{\vartriangleright}{\mathrel}{AMSA}{"42}
86 \DeclareMathSymbol{\vartriangleleft}{\mathrel}{AMSA}{"43}
87 \DeclareMathSymbol{\trianglerighteq}{\mathrel}{AMSA}{"44}
88 \DeclareMathSymbol{\trianglelefteq}{\mathrel}{AMSA}{"45}
89 \DeclareMathSymbol{\bigstar}{\mathord}{AMSA}{"46}
90 \DeclareMathSymbol{\between}{\mathrel}{AMSA}{"47}
91 \DeclareMathSymbol{\blacktriangledown}{\mathord}{AMSA}{"48}
92 \DeclareMathSymbol{\blacktriangleright}{\mathrel}{AMSA}{"49}
93 \DeclareMathSymbol{\blacktriangleleft}{\mathrel}{AMSA}{"4A}
94 \DeclareMathSymbol{\vartriangle}{\mathrel}{AMSA}{"4D}
95 \DeclareMathSymbol{\blacktriangle}{\mathord}{AMSA}{"4E}

```

```

96 \DeclareMathSymbol{\triangledown}      {\mathord}{AMSA}{"4F}
97 \DeclareMathSymbol{\eqcirc}           {\mathrel}{AMSA}{"50}
98 \DeclareMathSymbol{\lesseqgtr}        {\mathrel}{AMSA}{"51}
99 \DeclareMathSymbol{\gtreqless}         {\mathrel}{AMSA}{"52}
100 \DeclareMathSymbol{\lesseqqgtr}       {\mathrel}{AMSA}{"53}
101 \DeclareMathSymbol{\gtreqqless}       {\mathrel}{AMSA}{"54}
102 \DeclareMathSymbol{\Rrightarrow}      {\mathrel}{AMSA}{"56}
103 \DeclareMathSymbol{\Lleftarrow}       {\mathrel}{AMSA}{"57}
104 \DeclareMathSymbol{\veebar}           {\mathbin}{AMSA}{"59}
105 \DeclareMathSymbol{\barwedge}         {\mathbin}{AMSA}{"5A}
106 \DeclareMathSymbol{\doublebarwedge}   {\mathbin}{AMSA}{"5B}
107 %% In amsfonts.sty
108 %% \DeclareMathSymbol{\angle}           {\mathord}{AMSA}{"5C}
109 \DeclareMathSymbol{\measuredangle}     {\mathord}{AMSA}{"5D}
110 \DeclareMathSymbol{\sphericalangle}    {\mathord}{AMSA}{"5E}
111 \DeclareMathSymbol{\varpropto}         {\mathrel}{AMSA}{"5F}
112 \DeclareMathSymbol{\smallsmile}        {\mathrel}{AMSA}{"60}
113 \DeclareMathSymbol{\smallfrown}        {\mathrel}{AMSA}{"61}
114 \DeclareMathSymbol{\Subset}           {\mathrel}{AMSA}{"62}
115 \DeclareMathSymbol{\Supset}            {\mathrel}{AMSA}{"63}
116 \DeclareMathSymbol{\Cup}               {\mathbin}{AMSA}{"64}
117 \global\let\doublecup\Cup
118 \DeclareMathSymbol{\Cap}               {\mathbin}{AMSA}{"65}
119 \global\let\doublecap\Cap
120 \DeclareMathSymbol{\curlywedge}        {\mathbin}{AMSA}{"66}
121 \DeclareMathSymbol{\curlyvee}          {\mathbin}{AMSA}{"67}
122 \DeclareMathSymbol{\leftthreetimes}    {\mathbin}{AMSA}{"68}
123 \DeclareMathSymbol{\rightthreetimes}   {\mathbin}{AMSA}{"69}
124 \DeclareMathSymbol{\subseteqq}         {\mathrel}{AMSA}{"6A}
125 \DeclareMathSymbol{\supseteqq}         {\mathrel}{AMSA}{"6B}
126 \DeclareMathSymbol{\bumpeq}           {\mathrel}{AMSA}{"6C}
127 \DeclareMathSymbol{\Bumpeq}           {\mathrel}{AMSA}{"6D}
128 \DeclareMathSymbol{\lll}              {\mathrel}{AMSA}{"6E}
129 \global\let\llless\lll
130 \DeclareMathSymbol{\ggg}               {\mathrel}{AMSA}{"6F}
131 \global\let\gggtr\ggg
132 \DeclareMathSymbol{\circledS}          {\mathord}{AMSA}{"73}
133 \DeclareMathSymbol{\pitchfork}         {\mathrel}{AMSA}{"74}
134 \DeclareMathSymbol{\dotplus}           {\mathbin}{AMSA}{"75}
135 \DeclareMathSymbol{\backsim}           {\mathrel}{AMSA}{"76}
136 \DeclareMathSymbol{\backsimeq}         {\mathrel}{AMSA}{"77}
137 \DeclareMathSymbol{\complement}        {\mathord}{AMSA}{"7B}
138 \DeclareMathSymbol{\intercal}          {\mathbin}{AMSA}{"7C}
139 \DeclareMathSymbol{\circledcirc}       {\mathbin}{AMSA}{"7D}
140 \DeclareMathSymbol{\circledast}        {\mathbin}{AMSA}{"7E}
141 \DeclareMathSymbol{\circleddash}       {\mathbin}{AMSA}{"7F}
142 %% Begin AMSb declarations
143 \DeclareMathSymbol{\lvertneqq}         {\mathrel}{AMSb}{"00}
144 \DeclareMathSymbol{\gvertneqq}         {\mathrel}{AMSb}{"01}
145 \DeclareMathSymbol{\nleq}              {\mathrel}{AMSb}{"02}

```

146 \DeclareMathSymbol{\ngeq}	{\mathrel}{AMSb}{"03}
147 \DeclareMathSymbol{\nless}	{\mathrel}{AMSb}{"04}
148 \DeclareMathSymbol{\ngtr}	{\mathrel}{AMSb}{"05}
149 \DeclareMathSymbol{\nprec}	{\mathrel}{AMSb}{"06}
150 \DeclareMathSymbol{\nsucc}	{\mathrel}{AMSb}{"07}
151 \DeclareMathSymbol{\lneqq}	{\mathrel}{AMSb}{"08}
152 \DeclareMathSymbol{\gneqq}	{\mathrel}{AMSb}{"09}
153 \DeclareMathSymbol{\nleqslant}	{\mathrel}{AMSb}{"0A}
154 \DeclareMathSymbol{\ngeqslant}	{\mathrel}{AMSb}{"0B}
155 \DeclareMathSymbol{\lneq}	{\mathrel}{AMSb}{"0C}
156 \DeclareMathSymbol{\gneq}	{\mathrel}{AMSb}{"0D}
157 \DeclareMathSymbol{\npreceq}	{\mathrel}{AMSb}{"0E}
158 \DeclareMathSymbol{\nsucceq}	{\mathrel}{AMSb}{"0F}
159 \DeclareMathSymbol{\precnsim}	{\mathrel}{AMSb}{"10}
160 \DeclareMathSymbol{\succnsim}	{\mathrel}{AMSb}{"11}
161 \DeclareMathSymbol{\lnsim}	{\mathrel}{AMSb}{"12}
162 \DeclareMathSymbol{\gnsim}	{\mathrel}{AMSb}{"13}
163 \DeclareMathSymbol{\nleqq}	{\mathrel}{AMSb}{"14}
164 \DeclareMathSymbol{\ngeqq}	{\mathrel}{AMSb}{"15}
165 \DeclareMathSymbol{\precneqq}	{\mathrel}{AMSb}{"16}
166 \DeclareMathSymbol{\succneqq}	{\mathrel}{AMSb}{"17}
167 \DeclareMathSymbol{\precnapprox}	{\mathrel}{AMSb}{"18}
168 \DeclareMathSymbol{\succnapprox}	{\mathrel}{AMSb}{"19}
169 \DeclareMathSymbol{\lnapprox}	{\mathrel}{AMSb}{"1A}
170 \DeclareMathSymbol{\gnapprox}	{\mathrel}{AMSb}{"1B}
171 \DeclareMathSymbol{\nsim}	{\mathrel}{AMSb}{"1C}
172 \DeclareMathSymbol{\ncong}	{\mathrel}{AMSb}{"1D}
173 \DeclareMathSymbol{\diagup}	{\mathord}{AMSb}{"1E}
174 \DeclareMathSymbol{\diagdown}	{\mathord}{AMSb}{"1F}
175 \DeclareMathSymbol{\varsubsetneq}	{\mathrel}{AMSb}{"20}
176 \DeclareMathSymbol{\varsupsetneq}	{\mathrel}{AMSb}{"21}
177 \DeclareMathSymbol{\nsubseteqq}	{\mathrel}{AMSb}{"22}
178 \DeclareMathSymbol{\nsupseteqq}	{\mathrel}{AMSb}{"23}
179 \DeclareMathSymbol{\subseteqq}	{\mathrel}{AMSb}{"24}
180 \DeclareMathSymbol{\supseteqq}	{\mathrel}{AMSb}{"25}
181 \DeclareMathSymbol{\varsubsetneqq}	{\mathrel}{AMSb}{"26}
182 \DeclareMathSymbol{\varsupsetneqq}	{\mathrel}{AMSb}{"27}
183 \DeclareMathSymbol{\subsetneq}	{\mathrel}{AMSb}{"28}
184 \DeclareMathSymbol{\supsetneq}	{\mathrel}{AMSb}{"29}
185 \DeclareMathSymbol{\nsubseteq}	{\mathrel}{AMSb}{"2A}
186 \DeclareMathSymbol{\nsupseteq}	{\mathrel}{AMSb}{"2B}
187 \DeclareMathSymbol{\nparallel}	{\mathrel}{AMSb}{"2C}
188 \DeclareMathSymbol{\nmid}	{\mathrel}{AMSb}{"2D}
189 \DeclareMathSymbol{\nshortmid}	{\mathrel}{AMSb}{"2E}
190 \DeclareMathSymbol{\nshortparallel}	{\mathrel}{AMSb}{"2F}
191 \DeclareMathSymbol{\nvdash}	{\mathrel}{AMSb}{"30}
192 \DeclareMathSymbol{\nVdash}	{\mathrel}{AMSb}{"31}
193 \DeclareMathSymbol{\nvDash}	{\mathrel}{AMSb}{"32}
194 \DeclareMathSymbol{\nVDash}	{\mathrel}{AMSb}{"33}
195 \DeclareMathSymbol{\ntrianglerighteq}	{\mathrel}{AMSb}{"34}

```

196 \DeclareMathSymbol{\ntrianglelefteq}{\mathrel}{AMSb}{"35}
197 \DeclareMathSymbol{\ntriangleleft}{\mathrel}{AMSb}{"36}
198 \DeclareMathSymbol{\ntriangleright}{\mathrel}{AMSb}{"37}
199 \DeclareMathSymbol{\nleftarrow}{\mathrel}{AMSb}{"38}
200 \DeclareMathSymbol{\nrightarrow}{\mathrel}{AMSb}{"39}
201 \DeclareMathSymbol{\nLeftarrow}{\mathrel}{AMSb}{"3A}
202 \DeclareMathSymbol{\nRightarrow}{\mathrel}{AMSb}{"3B}
203 \DeclareMathSymbol{\nLeftrightarrow}{\mathrel}{AMSb}{"3C}
204 \DeclareMathSymbol{\nleftrightharrow}{\mathrel}{AMSb}{"3D}
205 \DeclareMathSymbol{\divideontimes}{\mathbin}{AMSb}{"3E}
206 \DeclareMathSymbol{\varnothing}{\mathord}{AMSb}{"3F}
207 \DeclareMathSymbol{\nexists}{\mathord}{AMSb}{"40}
208 \DeclareMathSymbol{\Finv}{\mathord}{AMSb}{"60}
209 \DeclareMathSymbol{\Game}{\mathord}{AMSb}{"61}
210 %% In amsfonts.sty:
211 %%\DeclareMathSymbol{\mho}{\mathord}{AMSb}{"66}
212 \DeclareMathSymbol{\eth}{\mathord}{AMSb}{"67}
213 \DeclareMathSymbol{\eqsim}{\mathrel}{AMSb}{"68}
214 \DeclareMathSymbol{\beth}{\mathord}{AMSb}{"69}
215 \DeclareMathSymbol{\gimel}{\mathord}{AMSb}{"6A}
216 \DeclareMathSymbol{\daleth}{\mathord}{AMSb}{"6B}
217 \DeclareMathSymbol{\lessdot}{\mathbin}{AMSb}{"6C}
218 \DeclareMathSymbol{\gtrdot}{\mathbin}{AMSb}{"6D}
219 \DeclareMathSymbol{\ltimes}{\mathbin}{AMSb}{"6E}
220 \DeclareMathSymbol{\rtimes}{\mathbin}{AMSb}{"6F}
221 \DeclareMathSymbol{\shortmid}{\mathrel}{AMSb}{"70}
222 \DeclareMathSymbol{\shortparallel}{\mathrel}{AMSb}{"71}
223 \DeclareMathSymbol{\smallsetminus}{\mathbin}{AMSb}{"72}
224 \DeclareMathSymbol{\thicksim}{\mathrel}{AMSb}{"73}
225 \DeclareMathSymbol{\thickapprox}{\mathrel}{AMSb}{"74}
226 \DeclareMathSymbol{\approxeq}{\mathrel}{AMSb}{"75}
227 \DeclareMathSymbol{\succapprox}{\mathrel}{AMSb}{"76}
228 \DeclareMathSymbol{\precapprox}{\mathrel}{AMSb}{"77}
229 \DeclareMathSymbol{\curvearrowleft}{\mathrel}{AMSb}{"78}
230 \DeclareMathSymbol{\curvearrowright}{\mathrel}{AMSb}{"79}
231 \DeclareMathSymbol{\digamma}{\mathord}{AMSb}{"7A}
232 \DeclareMathSymbol{\varkappa}{\mathord}{AMSb}{"7B}
233 \DeclareMathSymbol{\Bbbk}{\mathord}{AMSb}{"7C}
234 \DeclareMathSymbol{\hslash}{\mathord}{AMSb}{"7D}
235 %% In amsfonts.sty:
236 %%\DeclareMathSymbol{\hbar}{\mathord}{AMSb}{"7E}
237 \DeclareMathSymbol{\backepsilon}{\mathrel}{AMSb}{"7F}

```

Maintenant, nous fermons le groupe afin que " récupère son ancien code de catégorie.

```
238 \endgroup
```

Enfin, est mis le traditionnel `\endinput` pour garantir que des éléments inutiles en fin de fichier ne soient copiés par docstrip.

```
239 \endinput
```