

The mhchem Bundle

Documentation for the Packages

mhchem v3.13,
hpstatement v1.00 and
rsphrase v3.11

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The **mhchem** package provides commands for typesetting chemical molecular formulae and equations.

The **hpstatement** package provides commands for the official hazard statements and precautionary statements (H and P statements) that are used to label chemicals.

The **rsphrase** package provides commands for the official Risk and Safety (R and S) Phrases that are used to label chemicals.

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The mhchem Package

Currently under development

The mhchem package is still under development. Admittedly, very slow development with large breaks in between, but still progressing. Version 4 will be a major rewrite of the code with some new features and slight syntax changes (this will be the reason for the new number). While I try to support the old syntaxes via the `version` option, please note that slight changes in spacing (and therefore changed line breaks and page breaks) can occur from release to release.

Why that package?

For typesetting a single chemical formula from time to time, one can use L^AT_EX's math mode, manually setting the letters in an upright font.

$$\frac{1}{2} \text{H}_2\text{O} \quad \$\backslash\text{frac}\{1\}\{2\}\backslash,\backslash\text{mathrm}\{\text{H}\}_2\backslash\text{mathrm}\{\text{O}\}$$$

In addition, one has to care about the height of subscripts, as the following example shows. The 2 and the 7 are not aligned properly.

$$3 \text{Cr}_2\text{O}_7^{2-} \quad \$3\backslash,\backslash\text{mathrm}\{\text{Cr}\}_2\backslash\text{mathrm}\{\text{O}\}_7^{\{2-\}}$$$

So one would have to write

$$3 \text{Cr}_2\text{O}_7^{2-} \quad \$3\backslash,\backslash\text{mathrm}\{\text{Cr}\}_2^{\{\backslashstrut\}}\backslash\text{mathrm}\{\text{O}\}_7^{\{2-\}}$$$

But this in turn changes the line height. That has to be compensated. And so on and so forth. At the end, you have to write long commands and may be lost eventually, when a formula should appear inside a section header with a different font.

mhchem is here to assist you. To mention a few of its features:

- Adaptation to the surrounding environment
If used inside normal text or a section header, the formula is displayed using the current text font. If used inside a math environment, the current math font is used in the appropriate size.
- More natural input
I am convinced that (when expecting a chemical formula) it is easier to read and write H3PO4 than H_3PO_4. The latter is grouped wrongly according to the Gestalt rules. Furthermore, you can copy formulas from text e-mails and even Word documents and save a lot of time as you do not have to insert underscores. (One could argue that this is inconsistent with math mode and could lead to confusions. I believe, however that O2 and x_2 are sufficiently distinct concepts.)

- Easy input of amount numbers
with automatic spacing; easy input of fractions
 - Fine typographic corrections
fine correction of the height of subscripts and superscripts; right-aligned left-side sub-
and superscripts
- ... and a lot more. But let us end the ad block here and see ourselves how easy it can be to typeset chemical formulae.

Preamble

In order to use all of mhchem's features, request it in your document's preamble with the command

`\usepackage[version=3]{mhchem}` !

What about the `version=3`? During development, I became aware that additional functionality could not be added without changing the user-interface slightly. But what about backward compatibility? I could, of course, have frozen mhchem and published an mhchem2 package. However, I decided to use an option in order to switch to the new interface. One can use `version=3` for the most-recent version of mhchem, but `version=2` and `version=1` (or no option at all, but this will yield a warning) are still there for existing documents that use an old user-interface of mhchem. Those old documents should still produce the same results. However, spacing might differ slightly.

mhchem includes the following packages: amsmath, calc, graphics, ifthen, keyval, pdf-texcmds, twoopt.

Basics

H_2O	<code>\ce{H2O}</code>
Sb_2O_3	<code>\ce{Sb2O3}</code>
H^+	<code>\ce{H+}</code>
CrO_4^{2-}	<code>\ce{CrO4^2-}</code>
AgCl_2^-	<code>\ce{AgCl2-}</code>
$[\text{AgCl}_2]^-$	<code>\ce{[AgCl2]-}</code>
Y^{99+}	<code>\ce{Y^{99}+}</code>
Y^{99+}	<code>\ce{Y^{99+}}</code>
$\text{H}_{2(\text{aq})}$	<code>\ce{H2_{(aq)}}</code>
NO_3^-	<code>\ce{NO3-}</code>
$(\text{NH}_4)_2\text{S}$	<code>\ce{(NH4)2S}</code>

Amounts

Place amounts directly in front of a formula. A small space will be inserted automatically.

$2\text{H}_2\text{O}$ `\ce{2H2O}`

$0.5\text{H}_2\text{O}$ `\ce{0.5H2O}`

version \geq 3.13

$\frac{1}{2}\text{H}_2\text{O}$ `\ce{1/2H2O}`

Isotopes

$^{227}_{90}\text{Th}^+$ `\ce{^{227}_{90}Th+}`

Fonts

A few words about fonts. LaTeX distinguishes between text fonts and math fonts. In general, the math fonts have much more glyphs: alphas, nabla operators and all that kind of stuff. Ideally, the math font looks very similar to the text font and that is why many LaTeX users do not know about the two kinds of fonts. However, the distinction is important for the use of mhchem.

In the following examples, I will switch the text font to sans serif. This way, one can easily distinguish text font (sans serif) from math font (with serifs).

When you are in a math environment (e.g. opened and closed with a $\$$), you could simply use `\ce`. Its content will be set in an upright math font. (Remember: all variables—like V for volume—are set using an italic font, physical units and chemical elements are set using an upright font.)

$V_{\text{H}_2\text{O}}$ `\$V_{\ce{H2O}}\$`

When used in text mode, `\ce` adapts to the current text font. You could simply write a formula in one of your section titles it would be set with the correct font, no matter where it appears (section title, header, table of contents, references, ...).

H_2O , H_2O `\ce{H2O}`, `\$ \ce{H2O} \$`

Ce^{IV} , Ce^{IV} `\ce{Ce^{IV}}`, `\$ \ce{Ce^{IV}} \$`

version \geq 2.04

There are some special cases. A negative charge in text mode is replaced with a dash (–, normally input as --), because a text minus sign is often too short (compare Cl^- and Cl^-). All ‘operators’ in equations, e.g. ‘+’ and reaction arrows, are taken from the math font.

Special Symbols

$\text{KCr}(\text{SO}_4)_2 \cdot 12 \text{H}_2\text{O}$ `\ce{KCr(SO4)2*12H2O}`

$\text{KCr}(\text{SO}_4)_2 \cdot 12 \text{H}_2\text{O}$ `\ce{KCr(SO4)2.12H2O}`

$[\text{Cd}\{\text{SC}(\text{NH}_2)_2\}_2] \cdot [\text{Cr}(\text{SCN})_4(\text{NH}_3)_2]_2$
`\ce{[Cd\{SC(NH2)2\}2].[Cr(SCN)4(NH3)2]2}`

RNO_2^- , RNO_2^- `\ce{\$RNO2^{\sim}\$}`, `\ce{RNO2^{\sim}}` version ≥ 2

$\mu\text{-Cl}$ `\ce{\$\mu\hyphen\$Cl}` version ≥ 3.05

Bonds

Horizontal bonds can be set using the characters -, = and # (single, double, triple bond) inside a formula (a - at the end of a formula yields a negative charge). version ≥ 2

$\text{C}_6\text{H}_5\text{-CHO}$ `\ce{C6H5-CH0}`

$\text{X=Y}\equiv\text{Z}$ `\ce{X=Y\#Z}`

Different books visualise bonds in extremely different ways. Here, the minus sign from the math font is used to display the bonds (even in text mode). The bonds are vertically aligned on the math axis. For most math fonts, this is slightly lower than half the height of a capital letter.

The `\bond` command allows you to typeset special bonds. version ≥ 3

$\text{A-B}\equiv\text{C}\equiv\text{D}$ `\ce{A\bond{-}B\bond{=}C\bond{\#}D}`

$\text{A}\text{--}\text{B}=\text{C}$ `\ce{A\bond{\sim}B\bond{\sim-}C}`

$\text{A}\equiv\text{B}\equiv\text{C}\equiv\text{D}$ `\ce{A\bond{\sim-}B\bond{\sim=}C\bond{\sim-}D}`

$\text{A}\cdots\text{B}\cdots\text{C}$ `\ce{A\bond{\dots}B\bond{\dots}C}`

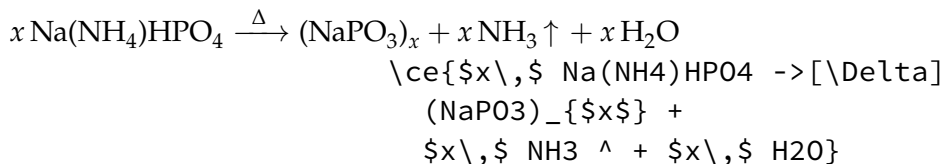
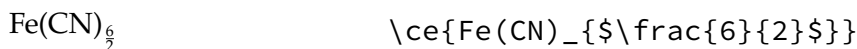
$\text{A}\rightarrow\text{B}\leftarrow\text{C}$ `\ce{A\bond{->}B\bond{<-}C}`

Please be aware, that the dashed bonds use the `\scalebox` macro internally, which may not be visualised correctly by some DVI viewers. If you switch to another math font, the sidebearing of the minus sign may vary, which would cause the dashed bonds to align badly (in `\bond{\sim-}`, for instance). In that case, you may want to adjust the layout by using the command `\mhchemoptions{minus-sidebearing-left=0.06em, minus-sidebearing-right=0.11em}` with the appropriate values.

Using Math

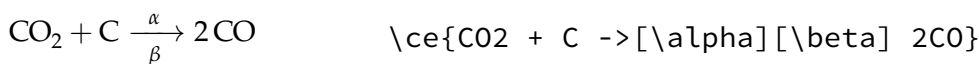
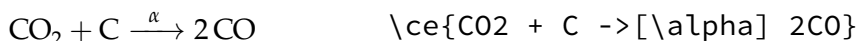
To use math commands inside `\ce`, these commands can be enclosed by `$`.

version ≥ 3.05

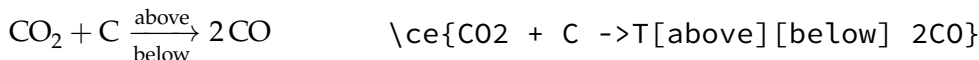
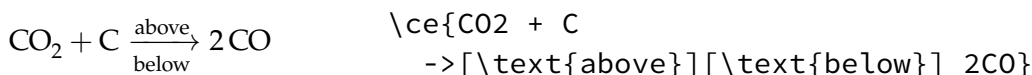
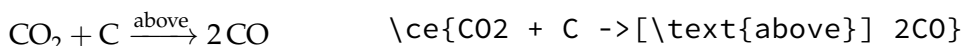


Formulae

Reaction Arrows



As with `^` and `_`, the content above and below reaction arrows is set in math font. When you want to put descriptive text there, use the `\text` command. Or, as a shortcut, you could type a 'T' between reaction arrow and opening bracket.

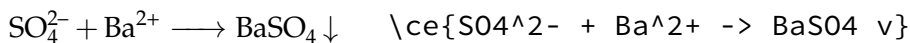


Similarly, there is a shortcut for using `\ce` with reaction arrows:



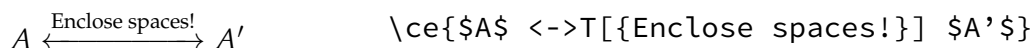
Precipitate and Gas

Use v or (v) for precipitate (arrow down) and ^ or (^) for gas (arrow up), all of them separated by spaces.

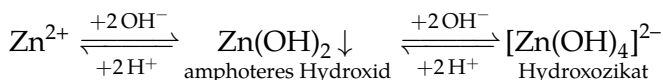
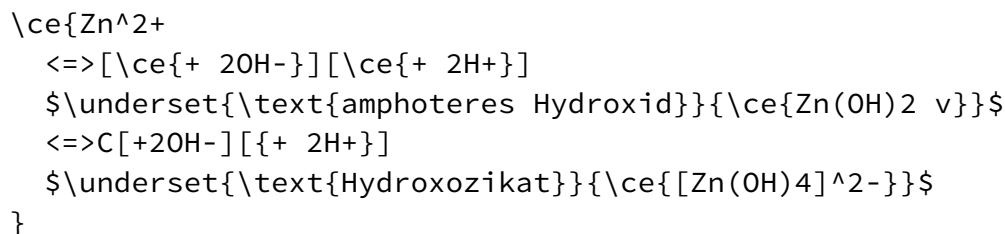


Watch Out!

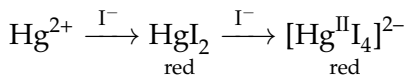
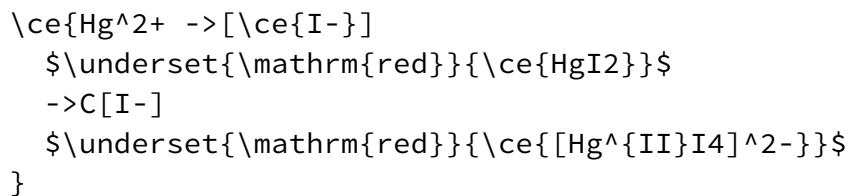
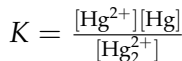
Please be aware that you sometimes have to enclose spaces in braces. In particular, you have to do so, when they appear between brackets that belong to an reaction arrow.



Further Examples



version ≥ 3.05



version ≥ 3.05

Tips and Tricks

When you use equation environments containing a `\ce` very often, you may want to create your own command. Then you could (in your preamble, preferably) define the following two commands

```
\newcommand\reaction[1]{\begin{equation}\ce{#1}\end{equation}}
\newcommand\reactionnonumber[1]%
{\begin{equation*}\ce{#1}\end{equation*}}
```

and then use them as follows.

```
CO2 + C      (0.1) \reaction{C02 + C}
CO2 + C      \reactionnonumber{C02 + C}
```

The advanced L^AT_EX user could replace the two definitions by

```
\makeatletter
\newcommand\reaction@[1]{\begin{equation}\ce{#1}\end{equation}}
\newcommand\reaction@nonumber[1]%
{\begin{equation*}\ce{#1}\end{equation*}}
\newcommand\reaction{\@ifstar{\reaction@nonumber}{\reaction@}}
\makeatother
```

and then write

```
CO2 + C      (0.2) \reaction{C02 + C}
CO2 + C      \reaction*{C02 + C}
```

for the same result.

So far, so good. All reactions will be labelled exactly as all the equations. A few people asked for a different set of numbers for equations and reactions. One could use this code:

```
\makeatletter
\newcounter{reaction}
%%% >> for article <<
%\renewcommand\thereaction{C\,\arabic{reaction}}
%%% << for article <<
%%% >> for report and book >>
\renewcommand\thereaction{C\,\thechapter.\arabic{reaction}}
\@addtoreset{reaction}{chapter}
%%% << for report and book <<
\newcommand\reactiontag%
{\refstepcounter{reaction}\tag{\thereaction}}
```

```

\newcommand\reaction@[2][]%
  {\begin{equation}\ce{#2}%
  \ifx\@empty#1\@empty\else\label{#1}\fi%
  \reactiontag\end{equation}}
\newcommand\reaction@nonumber[1]%
  {\begin{equation*}\ce{#1}\end{equation*}}
\newcommand\reaction%
  {\@ifstar{\reaction@nonumber}{\reaction@}}
\makeatother

```

With that, all reactions will be labelled independently of the equations.



$\text{CO}_2 + \text{C}$	(C0.1)	<code>\begin{equation}a+b\end{equation}</code>
		<code>\reaction{C02 + C}</code>
$\text{CO}_2 + \text{C}$		<code>\reaction*{C02 + C}</code>
		<code>\reaction[react:co]{C02 + C}</code>
$\text{CO}_2 + \text{C}$	(C0.2)	<code>\begin{equation}a+b\end{equation}</code>



Equation Environments

version ≥ 2

When using equation environments, you can use the `\cee` command. The advantage is, that `\cee` can take the `&` and `\` macros as input and passes them on to the surrounding environment.

	<code>\begin{align*}</code>
$\text{RNO}_2 \xrightleftharpoons{+e} \text{RNO}_2^-$	<code>\cee{RNO2 &=>C[+e] RNO2^{-.} \\\</code>
$\text{RNO}_2^- \xrightleftharpoons{+e} \text{RNO}_2^{2-}$	<code> RNO2^{-.} &=>C[+e] RNO2^{2-}</code>
	<code>\end{align*}</code>

Fine Tuning

In this section, several option switches will be explained. For instance,

```
\mhchemoptions{option=abc}
```

All options can also be used in the `\usepackage` command in your preamble, like

```
\usepackage[version=3,option=abc]{mhchem}
```

Fonts

As mentioned previously, mhchem uses the current text font (if you use `\ce` in text mode) or the current math font (if you use `\ce` in math mode). If you want, however, you can set a font that will be used for all your formulae and equations.

Inside your document, you can use

```
\mhchemoptions{textfontcommand=\sffamily}  
\mhchemoptions{mathfontcommand=\mathsf}
```

in order to get sans-serif fonts in both, text mode and math mode. There are two further options, that basically do the same, but only take the name of a single font command without the initial backslash.

```
\mhchemoptions{textfontname=sffamily}  
\mhchemoptions{mathfontname=mathsf}
```

Only the latter options can be used with the `\usepackage` command when loading mhchem (as an optional argument in brackets), because the font commands are not properly defined in the preamble yet.

Furthermore, there are two shortcuts:

```
\mhchemoptions{font=sf}
```

sets the two fonts to sans-serif, as mentioned above,

```
\mhchemoptions{font=}
```

switches back to the default, which is

```
\mhchemoptions{textfontcommand=, mathfontcommand=\mathrm}
```

Arrows

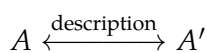
By default, mhchem uses arrows that are composed of different font characters (as does the `amsmath` package. This may lead to undesirable effects when displayed on a screen. Helmut Hänsel kindly provided a patch that used the `pgf` graphics package instead. `pgf` arrows are activated by

```
\mhchemoptions{arrows=pgf}
```

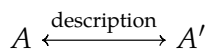
As explained, you can set this option in the `\usepackage` as well. If you don't, please do not forget to load the `tikz` package by hand. The `tikz` package is a wrapper for (and included in) the `pgf` bundle. The default setting is

`\mhchemoptions{arrows=font}`

Here is how it looks:



```
\mhchemoptions{arrows=font}%  
\ce{$A$ <->T[description] $A'$}
```



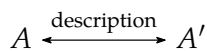
```
\mhchemoptions{arrows=pgf}%  
\ce{$A$ <->T[description] $A'$}
```

Arrow Tips

If you do not like the standard LaTeX arrows (or the ones of your current math font, respectively), here is the option for you:

`\mhchemoptions{arrows=pgf-filled}`

The same considerations as for the pgf option apply.



```
\mhchemoptions{arrows=pgf-filled}  
\ce{$A$ <->T[description] $A'$}
```

Major Changes

Migration from version 1

Inner - characters are considered to be bonds.

Use \$ for math mode inside \ce (no braces any more).

Migrating from version 2

Meaning and usage of \bond changed.

Most Recent Changes

2013-06-23 mhchem v3.13

- compatibility with many more babel languages
- fraction possible in amounts ($0.5\text{H}_2\text{O}$)

2013-06-17 mhchem v3.12

- fixed: incompatibility with babel Czech
- major internal refactorings

2013-06-17 hpstatement v1.00

- initial release with English statements

2011-06-03 mhchem v3.11

- fixed: incompatibility with mathdesign and other font-related packages

2011-04-29 mhchem v3.10

- fixed: incompatibility with biblatex

2011-03-18 mhchem v3.09

- fixed: $_{{\rm \$x\$}}$ now works properly

2010-06-16 rsphrase v3.08

- added: Italian phrases

2007-05-19 mhchem v3.0

- fixed: loading tikz automatically when option pdf-filled is used
- fixed: empty $\^{\{}}$ and $_{\{}}$ work properly

The **hpstatement** Package and the **rsphrase** Package

The **hpstatement** package contains all official hazard statements and precautionary statements (H and P) of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) and of the CLP Regulation of the European Union.

The statements are available in English German. If you are a native speaker of either Bulgarian, Czech, Danish, Dutch, Estonian, Finnish, French, Greek, Hungarian, Irish, Italian, Latvian, Lithuanian, Maltese, Polish, Portugese, Romanian, Slovak, Slovenian, Spanish or Swedish, and would like to help offering the statments in those languages, please contact me.

The **rsphrase** package contains the text of all official Risk and Safety (R and S) Phrases that were used to label chemicals.

These phrases are available in Danish, Englisch, French, German (current spelling), Spanish, and Italian.

Please be advised that, as stated in the license, the authors provide no warranty of correctness.

Usage

The **hpstatement** package provides two commands: `\hpstatement` and `\hpnumber`. `\hpstatement` insterts the statement's text, `\hpnumber` it's formatted number.

The statement H200
is 'Unstable explosives.'

The statement `\hpnumber{H200}\`
is '`\hpstatement{H200}`'

The **rsphrase** package works the same way, but provides two commands: `\rsnumber` and `\rsphrase`, respectively.

One can use the two commands with an empty argument. It is then assumed that the argument is equivalent to the one used previously.

The statement H200
is 'Unstable explosives.'

The statement `\hpnumber{H200}\`
is '`\hpstatement{}`'

The statement H200
is ‘Unstable explosives.’

The statement `\hpnumber{H200}\`
is ‘`\hpstatement{}`’

Some phrases allow you to choose between certain alternatives. In these cases, special numbers (`<number>.1`, `<number>.2`, ...) are available. Of course, the official number is typeset.

P210: Keep away from sparks. – No `\hpnumber{P210.2}`:
smoking. `\hpstatement{}`

For phrases with selection, an additional special number is provided that refers to the original version as stated in the regulations: `<number>.0` (e. g. P210.0).

Some statements refer to ‘this label’. If you are creating other documents than labels, you might want to rephrase this. You can do so, by using the `<number>.nolabel` statement (e. g. P321.nolabel).

Sources for the H and P statements are: Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006¹, a database with the extracted phrases, kindly provided by the author of schoolscout24.de², Commission Regulation (EU) No 286/2011 of 10 March 2011 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures³, and the manual creation of placeholder statements and proof-reading.

Sources for the R and S phrases are documents downloaded from <http://europa.eu.int>⁴.

¹<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:353:0001:1355:EN:PDF>

²<http://schoolscout24.de/cgi-bin/hpp/hppinput.cgi>

³<http://new.eur-lex.europa.eu/legal-content/EN/TXT/?qid=1369907325497&uri=CELEX:32011R0286>

⁴Previously to be found under http://europa.eu.int/comm/environment/dansub/pdfs/annex3_en.pdf and http://europa.eu.int/comm/environment/dansub/pdfs/annex4_en.pdf which in turn were linked from http://europa.eu.int/comm/environment/dansub/main67_548/index_en.htm

Appendix

List of Implemented H and P Statements

English

EUH001 (EUH001): Explosive when dry. **EUH006** (EUH006): Explosive with or without contact with air. **EUH014** (EUH014): Reacts violently with water. **EUH018.0** (EUH018): In use may form flammable/explosive vapour-air mixture. **EUH018.1** (EUH018): In use may form flammable vapour-air mixture. **EUH018.2** (EUH018): In use may form explosive vapour-air mixture. **EUH019** (EUH019): May form explosive peroxides. **EUH029** (EUH029): Contact with water liberates toxic gas. **EUH031** (EUH031): Contact with acids liberates toxic gas. **EUH032** (EUH032): Contact with acids liberates very toxic gas. **EUH044** (EUH044): Risk of explosion if heated under confinement. **EUH059** (EUH059): Hazardous to the ozone layer. **EUH066** (EUH066): Repeated exposure may cause skin dryness or cracking. **EUH070** (EUH070): Toxic by eye contact. **EUH071** (EUH071): Corrosive to the respiratory tract. **EUH201** (EUH201): Contains lead. Should not be used on surfaces liable to be chewed or sucked by children. **EUH201A** (EUH201A): Warning! Contains lead. **EUH202** (EUH202): Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children. **EUH203** (EUH203): Contains chromium (VI). May produce an allergic reaction. **EUH204** (EUH204): Contains isocyanates. May produce an allergic reaction. **EUH205** (EUH205): Contains epoxy constituents. May produce an allergic reaction. **EUH206** (EUH206): Warning! Do not use together with other products. May release dangerous gases (chlorine). **EUH207** (EUH207): Warning! Contains cadmium. Dangerous fumes are formed during use. See information supplied by the manufacturer. Comply with the safety instructions. **EUH208.0** (EUH208): Contains <name of sensitising substance>. May produce an allergic reaction. **EUH208[a]** (EUH208): Contains [a]. May produce an allergic reaction. **EUH209** (EUH209): Can become highly flammable in use. **EUH209A** (EUH209A): Can become flammable in use. **EUH210** (EUH210): Safety data sheet available on request. **EUH401** (EUH401): To avoid risks to human health and the environment, comply with the instructions for use. **H200** (H200): Unstable explosives. **H201** (H201): Explosive; mass explosion hazard. **H202** (H202): Explosive, severe projection hazard. **H203** (H203): Explosive; fire, blast or projection hazard. **H204** (H204): Fire or projection hazard. **H205** (H205): May mass explode in fire. **H220** (H220): Extremely flammable gas. **H221** (H221): Flammable gas. **H222** (H222): Extremely flammable aerosol. **H223** (H223): Flammable aerosol. **H224** (H224): Extremely flammable liquid and vapour. **H225** (H225): Highly flammable liquid and vapour. **H226** (H226): Flammable liquid and vapour. **H228** (H228): Flammable solid. **H240** (H240): Heating may cause an explosion. **H241** (H241): Heating may cause a fire or explosion. **H242** (H242): Heating may cause a fire. **H250** (H250): Catches fire spontaneously if exposed to air. **H251** (H251): Self-heating; may catch fire. **H252** (H252): Self-heating in large quantities; may catch fire. **H260** (H260): In contact with water releases flammable gases which may ignite spontaneously. **H261** (H261): In contact with water releases flammable gases. **H270** (H270): May cause or intensify fire; oxidiser. **H271** (H271): May cause fire or explosion; strong oxidiser. **H272** (H272): May intensify fire; oxidiser. **H280** (H280): Contains gas under pressure; may explode if heated. **H281** (H281): Contains refrigerated gas; may cause cryogenic burns or injury. **H290** (H290): May be corrosive to metals. **H300** (H300): Fatal if swallowed. **H301** (H301): Toxic if swallowed. **H302** (H302): Harmful if

swallowed. **H304** (H304): May be fatal if swallowed and enters airways. **H310** (H310): Fatal in contact with skin. **H311** (H311): Toxic in contact with skin. **H312** (H312): Harmful in contact with skin. **H314** (H314): Causes severe skin burns and eye damage. **H315** (H315): Causes skin irritation. **H317** (H317): May cause an allergic skin reaction. **H318** (H318): Causes serious eye damage. **H319** (H319): Causes serious eye irritation. **H330** (H330): Fatal if inhaled. **H331** (H331): Toxic if inhaled. **H332** (H332): Harmful if inhaled. **H334** (H334): May cause allergy or asthma symptoms or breathing difficulties if inhaled. **H335** (H335): May cause respiratory irritation. **H336** (H336): May cause drowsiness or dizziness. **H340.0** (H340): May cause genetic defects <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>. **H340** (H340): May cause genetic defects. **H340[a]** (H340): May cause genetic defects [a]. **H341.0** (H341): Suspected of causing genetic defects <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>. **H341** (H341): Suspected of causing genetic defects. **H341[a]** (H341): Suspected of causing genetic defects [a]. **H350.0** (H350): May cause cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>. **H350** (H350): May cause cancer. **H350[a]** (H350): May cause cancer [a]. **H350i** (H350i): May cause cancer by inhalation. **H351.0** (H351): Suspected of causing cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>. **H351** (H351): Suspected of causing cancer. **H351[a]** (H351): Suspected of causing cancer [a]. **H360.0** (H360): May damage fertility or the unborn child <state specific effect if known> <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>. **H360** (H360): May damage fertility or the unborn child. **H360[a]** (H360): May damage fertility or the unborn child [a]. **H360F** (H360F): May damage fertility. **H360D** (H360D): May damage the unborn child. **H360f** (H360f): Suspected of damaging fertility. **H360d** (H360d): Suspected of damaging the unborn child. **H360FD** (H360FD): May damage fertility. May damage the unborn child. **H360fd** (H360fd): Suspected of damaging fertility. Suspected of damaging the unborn child. **H360Fd** (H360Fd): May damage fertility. Suspected of damaging the unborn child. **H360Df** (H360Df): May damage the unborn child. Suspected of damaging fertility. **H361.0** (H361): Suspected of damaging fertility or the unborn child <state specific effect if known> <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>. **H361** (H361): Suspected of damaging fertility or the unborn child. **H361[a]** (H361): Suspected of damaging fertility or the unborn child [a]. **H362** (H362): May cause harm to breast-fed children. **H370.0** (H370): Causes damage to organs <or state all organs affected, if known> <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>. **H370** (H370): Causes damage to organs. **H370[a]** (H370): Causes damage to [a]. **H370[a][b]** (H370): Causes damage to [a] [b]. **H371.0** (H371): May cause damage to organs <or state all organs affected, if known> <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>. **H371** (H371): May cause damage to organs. **H371[a]** (H371): May cause damage to [a]. **H371[a][b]** (H371): May cause damage to [a] [b]. **H372.0** (H372): Causes damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>. **H372** (H372): Causes damage to organs through prolonged or repeated exposure. **H372[a]** (H372): Causes damage to [a] through prolonged or repeated exposure. **H372[a][b]** (H372): Causes damage to [a] through prolonged or repeated exposure [b]. **H373.0** (H373): May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>. **H373** (H373): May cause damage to organs through prolonged or repeated exposure. **H373[a]** (H373): May cause damage to [a] through prolonged or repeated exposure. **H373[a][b]** (H373): May cause damage to [a] through prolonged or repeated exposure [b]. **H300+H310** (H300 + H310): Fatal if swallowed or in contact with skin **H300+H330** (H300 + H330): Fatal if swallowed or if inhaled **H310+H330** (H310 + H330): Fatal in contact with skin or if inhaled **H300+H310+H330** (H300 + H310 + H330): Fatal if swallowed, in contact with skin or if inhaled **H301+H311** (H301 + H311): Toxic if swallowed or in contact with skin **H301+H331** (H301 + H331): Toxic if swallowed or if inhaled **H311+H331** (H311 + H331): Toxic in contact with skin or if inhaled **H301+H311+H331** (H301 + H311 + H331): Toxic if swallowed, in contact with

skin or if inhaled **H302+H312** (H302 + H312): Harmful if swallowed or in contact with skin **H302+H332** (H302 + H332): Harmful if swallowed or if inhaled **H312+H332** (H312 + H332): Harmful in contact with skin or if inhaled **H301+H312+H332** (H301 + H312 + H332): Harmful if swallowed, in contact with skin or if inhaled **H400** (H400): Very toxic to aquatic life. **H410** (H410): Very toxic to aquatic life with long lasting effects. **H411** (H411): Toxic to aquatic life with long lasting effects. **H412** (H412): Harmful to aquatic life with long lasting effects. **H413** (H413): May cause long lasting harmful effects to aquatic life. **H420** (H420): +++
P101 (P101): If medical advice is needed, have product container or label at hand. **P101.nolabel[a]** (P101): If medical advice is needed, have product container or [a] at hand. **P102** (P102): Keep out of reach of children. **P103** (P103): Read label before use. **P103.nolabel[a]** (P103): Read [a] before use. **P201** (P201): Obtain special instructions before use. **P202** (P202): Do not handle until all safety precautions have been read and understood. **P210.0** (P210): Keep away from heat/sparks/open flames/hot surfaces. – No smoking. **P210[a]** (P210): Keep away from [a]. – No smoking. **P210.1** (P210): Keep away from heat. – No smoking. **P210.2** (P210): Keep away from sparks. – No smoking. **P210.3** (P210): Keep away from open flames. – No smoking. **P210.4** (P210): Keep away from hot surfaces. – No smoking. **P211** (P211): Do not spray on an open flame or other ignition source. **P220.0** (P220): Keep/Store away from clothing/.../combustible materials. **P220.1.0** (P220): Keep away from clothing/.../combustible materials. **P220.1[a]** (P220): Keep away from [a]. **P220.1.1** (P220): Keep away from clothing. **P220.1.2** (P220): Keep away from combustible materials. **P220.2.0** (P220): Store away from clothing/.../combustible materials. **P220.2[a]** (P220): Store away from [a]. **P220.2.1** (P220): Store away from clothing. **P220.2.2** (P220): Store away from combustible materials. **P221.0** (P221): Take any precaution to avoid mixing with combustibles... **P221[a]** (P221): Take any precaution to avoid mixing with [a]. **P221.1** (P221): Take any precaution to avoid mixing with combustibles. **P222** (P222): Do not allow contact with air. **P223** (P223): Keep away from any possible contact with water, because of violent reaction and possible flash fire. **P230.0** (P230): Keep wetted with... **P230[a]** (P230): Keep wetted with [a]. **P231** (P231): Handle under inert gas. **P231+P232** (P231 + P232): Handle under inert gas. Protect from moisture. **P232** (P232): Protect from moisture. **P233** (P233): Keep container tightly closed. **P234** (P234): Keep only in original container. **P235** (P235): Keep cool. **P235+P410** (P235 + P410): Keep cool. Protect from sunlight. **P240** (P240): Ground/bond container and receiving equipment. **P241.0** (P241): Use explosion-proof electrical/ventilating/lighting/.../equipment. **P241[a]** (P241): Use explosion-proof [a]. **P241.1** (P241): Use explosion-proof electrical equipment. **P241.2** (P241): Use explosion-proof ventilating equipment. **P241.3** (P241): Use explosion-proof lighting equipment. **P242** (P242): Use only non-sparking tools. **P243** (P243): Take precautionary measures against static discharge. **P244** (P244): Keep reduction valves free from grease and oil. **P250.0** (P250): Do not subject to grinding/shock/.../friction. **P250[a]** (P250): Do not subject to [a]. **P250.1** (P250): Do not subject to grinding. **P250.2** (P250): Do not subject to shock. **P250.3** (P250): Do not subject to friction. **P251** (P251): Pressurized container: Do not pierce or burn, even after use. **P260.0** (P260): Do not breathe dust/fume/gas/mist/vapours/spray. **P260[a]** (P260): Do not breathe [a]. **P260.1** (P260): Do not breathe dust. **P260.2** (P260): Do not breathe fume. **P260.3** (P260): Do not breathe gas. **P260.4** (P260): Do not breathe mist. **P260.5** (P260): Do not breathe vapours. **P260.6** (P260): Do not breathe spray. **P261** (P261): Avoid breathing dust/fume/gas/mist/vapours/spray. **P262** (P262): Do not get in eyes, on skin, or on clothing. **P263.0** (P263): Avoid contact during pregnancy/while nursing. **P263[a]** (P263): Avoid contact [a]. **P263.1** (P263): Avoid contact during pregnancy. **P263.2** (P263): Avoid contact while nursing. **P264.0** (P264): Wash ...thoroughly after handling. **P264[a]** (P264): Wash [a] thoroughly after handling. **P270** (P270): Do not eat, drink or smoke when using this product. **P271** (P271): Use only outdoors or in a well-ventilated area. **P272** (P272): Contaminated work clothing should not be allowed out of the workplace. **P273** (P273): Avoid release to the environment. **P280.0** (P280): Wear protective gloves/protective clothing/eye protection/face protection. **P280[a]** (P280): Wear [a]. **P280.1** (P280): Wear protective gloves. **P280.2** (P280): Wear protective clothing. **P280.3** (P280): Wear eye protection. **P280.4** (P280): Wear face protection. **P281** (P281): Use personal protective equipment as required. **P282.0** (P282): Wear cold insulating gloves/face shield/eye protection. **P282[a]** (P282): Wear [a]. **P282.1** (P282): Wear cold insulating gloves. **P282.2** (P282): Wear face shield. **P282.3** (P282): Wear eye protec-

tion. **P283.0** (P283): Wear fire/flame resistant/retardant clothing. **P283[a]** (P283): Wear [a] clothing. **P284** (P284): Wear respiratory protection. **P285** (P285): In case of inadequate ventilation wear respiratory protection. **P301** (P301): IF SWALLOWED: **P301+P310** (P301 + P310): IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. **P301+P312** (P301 + P312): IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. **P301+P330+P331** (P301 + P330 + P331): IF SWALLOWED: rinse mouth. Do NOT induce vomiting. **P302** (P302): IF ON SKIN: **P302+P334.0** (P302 + P334): IF ON SKIN: Immerse in cool water/wrap in wet bandages. **P302+P334[a]** (P302 + P334): IF ON SKIN: [a]. **P302+P334.1** (P302 + P334): IF ON SKIN: Immerse in cool water. **P302+P334.2** (P302 + P334): IF ON SKIN: Wrap in wet bandages. **P302+P350** (P302 + P350): IF ON SKIN: Gently wash with plenty of soap and water. **P302+P352** (P302 + P352): IF ON SKIN: Wash with plenty of soap and water. **P303** (P303): IF ON SKIN (or hair): **P303+P361+P353** (P303 + P361 + P353): IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. **P304** (P304): IF INHALED: **P304+P340** (P304 + P340): IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. **P304+P341** (P304 + P341): IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. **P305** (P305): IF IN EYES: **P305+P351+P338** (P305 + P351 + P338): IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **P306** (P306): IF ON CLOTHING: **P306+P360** (P306 + P360): IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes. **P307** (P307): IF exposed: **P307+P311** (P307 + P311): IF exposed: Call a POISON CENTER or doctor/physician. **P308** (P308): IF exposed or concerned: **P308+P313** (P308 + P313): IF exposed or concerned: Get medical advice/attention. **P309** (P309): IF exposed or if you feel unwell: **P309+P311** (P309 + P311): IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. **P310** (P310): Immediately call a POISON CENTER or doctor/physician. **P311** (P311): Call a POISON CENTER or doctor/physician. **P312** (P312): Call a POISON CENTER or doctor/physician if you feel unwell. **P313** (P313): Get medical advice/attention. **P314** (P314): Get medical advice/attention if you feel unwell. **P315** (P315): Get immediate medical advice/attention. **P320.0** (P320): Specific treatment is urgent (see ...on this label). **P320[a]** (P320): Specific treatment is urgent (see [a] on this label). **P320.nolabel[a]** (P320): Specific treatment is urgent (see [a]). **P321.0** (P321): Specific treatment (see ...on this label). **P321[a]** (P321): Specific treatment (see [a] on this label). **P321.nolabel[a]** (P321): Specific treatment (see [a]). **P322.0** (P322): Specific measures (see ...on this label). **P322[a]** (P322): Specific measures (see [a] on this label). **P322.nolabel[a]** (P322): Specific measures (see [a]). **P330** (P330): Rinse mouth. **P331** (P331): Do NOT induce vomiting. **P332** (P332): If skin irritation occurs: **P332+P313** (P332 + P313): If skin irritation occurs: Get medical advice/attention. **P333** (P333): If skin irritation or rash occurs: **P333+P313** (P333 + P313): If skin irritation or rash occurs: Get medical advice/attention. **P334.0** (P334): Immerse in cool water/wrap in wet bandages. **P334.1** (P334): Immerse in cool water. **P334.2** (P334): Wrap in wet bandages. **P335** (P335): Brush off loose particles from skin. **P335+P334.0** (P335 + P334): Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. **P335+P334.1** (P335 + P334): Brush off loose particles from skin. Immerse in cool water. **P335+P334.2** (P335 + P334): Brush off loose particles from skin. Wrap in wet bandages. **P336** (P336): Thaw frosted parts with lukewarm water. Do no rub affected area. **P337** (P337): If eye irritation persists: **P337+P313** (P337 + P313): If eye irritation persists: Get medical advice/attention. **P338** (P338): Remove contact lenses, if present and easy to do. Continue rinsing. **P340** (P340): Remove victim to fresh air and keep at rest in a position comfortable for breathing. **P341** (P341): If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. **P342** (P342): If experiencing respiratory symptoms: **P342+P311** (P342 + P311): If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. **P350** (P350): Gently wash with plenty of soap and water. **P351** (P351): Rinse cautiously with water for several minutes. **P352** (P352): Wash with plenty of soap and water. **P353** (P353): Rinse skin with water/shower. **P360** (P360): Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. **P361** (P361): Remove/Take off immediately all contaminated clothing. **P362** (P362): Take off contaminated clothing and wash before reuse. **P363** (P363): Wash contaminated clothing

before reuse. **P370** (P370): In case of fire: **P370+P376** (P370 + P376): In case of fire: Stop leak if safe to do so. **P370+P378.0** (P370 + P378): In case of fire: Use ...for extinction. **P370+P378[a]** (P370 + P378): In case of fire: Use [a] for extinction. **P370+P380** (P370 + P380): In case of fire: Evacuate area. **P370+P380+P375** (P370 + P380 + P375): In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. **P371** (P371): In case of major fire and large quantities: **P371+P380+P375** (P371 + P380 + P375): In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. **P372** (P372): Explosion risk in case of fire. **P373** (P373): DO NOT fight fire when fire reaches explosives. **P374** (P374): Fight fire with normal precautions from a reasonable distance. **P375** (P375): Fight fire remotely due to the risk of explosion. **P376** (P376): Stop leak if safe to do so. **P377** (P377): Leaking gas fire: Do not extinguish, unless leak can be stopped safely. **P378.0** (P378): Use ...for extinction. **P378[a]** (P378): Use [a] for extinction. **P380** (P380): Evacuate area. **P381** (P381): Eliminate all ignition sources if safe to do so. **P390** (P390): Absorb spillage to prevent material damage. **P391** (P391): Collect spillage. **P401.0** (P401): Store ... **P401[a]** (P401): Store [a]. **P402** (P402): Store in a dry place. **P402+P404** (P402 + P404): Store in a dry place. Store in a closed container. **P403** (P403): Store in a well-ventilated place. **P403+P233** (P403 + P233): Store in a well-ventilated place. Keep container tightly closed. **P403+P235** (P403 + P235): Store in a well-ventilated place. Keep cool. **P404** (P404): Store in a closed container. **P405** (P405): Store locked up. **P406.0** (P406): Store in corrosive resistant/...container with a resistant inner liner. **P406[a]** (P406): Store in [a] container with a resistant inner liner. **P406.1** (P406): Store in corrosive resistant container with a resistant inner liner. **P407** (P407): Maintain air gap between stacks/pallets. **P410** (P410): Protect from sunlight. **P410+P403** (P410 + P403): Protect from sunlight. Store in a well-ventilated place. **P410+P412** (P410 + P412): Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. **P411** (P411): Store at temperatures not exceeding ...°C/...°F. **P411+P235** (P411 + P235): Store at temperatures not exceeding ...°C/...°F. Keep cool. **P412** (P412): Do not expose to temperatures exceeding 50°C/122°F. **P413.0** (P413): Store bulk masses greater than ... kg/... lbs at temperatures not exceeding ...°C/...°F. **P413.1[a][b]** (P413): Store bulk masses greater than [a] kg at temperatures not exceeding [b]°C. **P413.2[a][b]** (P413): Store bulk masses greater than [a] lbs at temperatures not exceeding [b]°F. **P420** (P420): Store away from other materials. **P422.0** (P422): Store contents under ... **P422[a]** (P422): Store contents under [a]. **P501.0.0** (P501): Dispose of contents/container to ... **P501.0[a]** (P501): Dispose of contents/container to [a]. **P501.1.0** (P501): Dispose of contents to ... **P501.1[a]** (P501): Dispose of contents to [a]. **P501.2.0** (P501): Dispose of container to ... **P501.2[a]** (P501): Dispose of container to [a].

List of Implemented R and S Phrases

English

The official phrases are given in American English. These phrases are typeset when the current Babel language is either set to `english`, `USenglish`, `american`, `UKenglish` or `british`.

R1: Explosive when dry. **R2:** Risk of explosion by shock, friction, fire or other sources of ignition. **R3:** Extreme risk of explosion by shock, friction, fire or other sources of ignition. **R4:** Forms very sensitive explosive metallic compounds. **R5:** Heating may cause an explosion. **R6:** Explosive with or without contact with air. **R7:** May cause fire. **R8:** Contact with combustible material may cause fire. **R9:** Explosive when mixed with combustible material. **R10:** Flammable. **R11:** Highly flammable. **R12:** Extremely flammable. **R14:** Reacts violently with water. **R15:** Contact with water liberates extremely flammable gases. **R16:** Explosive when mixed with oxidizing substances. **R17:** Spontaneously flammable in air. **R18:** In use, may form flammable/explosive vapour-air mixture. **R19:** May form explosive peroxides. **R20:** Harmful

by inhalation. **R 21:** Harmful in contact with skin. **R 22:** Harmful if swallowed. **R 23:** Toxic by inhalation. **R 24:** Toxic in contact with skin. **R 25:** Toxic if swallowed. **R 26:** Very toxic by inhalation. **R 27:** Very toxic in contact with skin. **R 28:** Very toxic if swallowed. **R 29:** Contact with water liberates toxic gas. **R 30:** Can become highly flammable in use. **R 31:** Contact with acids liberates toxic gas. **R 32:** Contact with acids liberates very toxic gas. **R 33:** Danger of cumulative effects. **R 34:** Causes burns. **R 35:** Causes severe burns. **R 36:** Irritating to eyes. **R 37:** Irritating to respiratory system. **R 38:** Irritating to skin. **R 39:** Danger of very serious irreversible effects. **R 40:** Limited evidence of a carcinogenic effect. **R 41:** Risk of serious damage to eyes. **R 42:** May cause sensitization by inhalation. **R 43:** May cause sensitization by skin contact. **R 44:** Risk of explosion if heated under confinement. **R 45:** May cause cancer. **R 46:** May cause heritable genetic damage. **R 48:** Danger of serious damage to health by prolonged exposure. **R 49:** May cause cancer by inhalation. **R 50:** Very toxic to aquatic organisms. **R 51:** Toxic to aquatic organisms. **R 52:** Harmful to aquatic organisms. **R 53:** May cause long-term adverse effects in the aquatic environment. **R 54:** Toxic to flora. **R 55:** Toxic to fauna. **R 56:** Toxic to soil organisms. **R 57:** Toxic to bees. **R 58:** May cause long-term adverse effects in the environment. **R 59:** Dangerous for the ozone layer. **R 60:** May impair fertility. **R 61:** May cause harm to the unborn child. **R 62:** Possible risk of impaired fertility. **R 63:** Possible risk of harm to the unborn child. **R 64:** May cause harm to breastfed babies. **R 65:** Harmful: may cause lung damage if swallowed. **R 66:** Repeated exposure may cause skin dryness or cracking. **R 67:** Vapours may cause drowsiness and dizziness. **R 68:** Possible risk of irreversible effects. **R 14/15:** Reacts violently with water, liberating extremely flammable gases. **R 15/29:** Contact with water liberates toxic, extremely flammable gas. **R 20/21:** Harmful by inhalation and in contact with skin. **R 20/22:** Harmful by inhalation and if swallowed. **R 20/21/22:** Harmful by inhalation, in contact with skin and if swallowed. **R 21/22:** Harmful in contact with skin and if swallowed. **R 23/24:** Toxic by inhalation and in contact with skin. **R 23/25:** Toxic by inhalation and if swallowed. **R 23/24/25:** Toxic by inhalation, in contact with skin and if swallowed. **R 24/25:** Toxic in contact with skin and if swallowed. **R 26/27:** Very toxic by inhalation and in contact with skin. **R 26/28:** Very toxic by inhalation and if swallowed. **R 26/27/28:** Very toxic by inhalation, in contact with skin and if swallowed. **R 27/28:** Very toxic in contact with skin and if swallowed. **R 36/37:** Irritating to eyes and respiratory system. **R 36/38:** Irritating to eyes and skin. **R 36/37/38:** Irritating to eyes, respiratory system and skin. **R 37/38:** Irritating to respiratory system and skin. **R 39/23:** Toxic: danger of very serious irreversible effects through inhalation. **R 39/24:** Toxic: danger of very serious irreversible effects in contact with skin. **R 39/25:** Toxic: danger of very serious irreversible effects if swallowed. **R 39/23/24:** Toxic: danger of very serious irreversible effects through inhalation and in contact with skin. **R 39/23/25:** Toxic: danger of very serious irreversible effects through inhalation and if swallowed. **R 39/24/25:** Toxic: danger of very serious irreversible effects in contact with skin and if swallowed. **R 39/23/24/25:** Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. **R 39/26:** Very toxic: danger of very serious irreversible effects through inhalation. **R 39/27:** Very toxic: danger of very serious irreversible effects in contact with skin. **R 39/28:** Very toxic: danger of very serious irreversible effects if swallowed. **R 39/26/27:** Very toxic: danger of very serious irreversible effects through inhalation and in contact with skin. **R 39/26/28:** Very toxic: danger of very serious irreversible effects through inhalation and if swallowed. **R 39/27/28:** Very toxic: danger of very serious irreversible effects in contact with skin and if swallowed. **R 39/26/27/28:** Very toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. **R 42/43:** May cause sensitization by inhalation and skin contact. **R 48/20:** Harmful: danger of serious damage to health by prolonged exposure through inhalation. **R 48/21:** Harmful: danger of serious damage to health by prolonged exposure in contact with skin. **R 48/22:** Harmful: danger of serious damage to health by prolonged exposure if swallowed. **R 48/20/21:** Harmful: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin. **R 48/20/22:** Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. **R 48/21/22:** Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. **R 48/20/21/22:** Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. **R 48/23:** Toxic: danger of serious damage to health by

prolonged exposure through inhalation. **R 48/24:** Toxic: danger of serious damage to health by prolonged exposure in contact with skin. **R 48/25:** Toxic: danger of serious damage to health by prolonged exposure if swallowed. **R 48/23/24:** Toxic: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin. **R 48/23/25:** Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. **R 48/24/25:** Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. **R 48/23/24/25:** Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. **R 50/53:** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. **R 51/53:** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. **R 52/53:** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. **R 68/20:** Harmful: possible risk of irreversible effects through inhalation. **R 68/21:** Harmful: possible risk of irreversible effects in contact with skin. **R 68/22:** Harmful: possible risk of irreversible effects if swallowed. **R 68/20/21:** Harmful: possible risk of irreversible effects through inhalation and in contact with skin. **R 68/20/22:** Harmful: possible risk of irreversible effects through inhalation and if swallowed. **R 68/21/22:** Harmful: possible risk of irreversible effects in contact with skin and if swallowed. **R 68/20/21/22:** Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

S 1: Keep locked up. **S 2:** Keep out of the reach of children. **S 3:** Keep in a cool place. **S 4:** Keep away from living quarters. **S 5:** Keep contents under **S 6:** Keep under **S 7:** Keep container tightly closed. **S 8:** Keep container dry. **S 9:** Keep container in a well-ventilated place. **S 12:** Do not keep the container sealed. **S 13:** Keep away from food, drink and animal feedingstuffs. **S 14:** Keep away from **S 15:** Keep away from heat. **S 16:** Keep away from sources of ignition - No smoking. **S 17:** Keep away from combustible material. **S 18:** Handle and open container with care. **S 20:** When using do not eat or drink. **S 21:** When using do not smoke. **S 22:** Do not breathe dust. **S 23:** Do not breathe **S 23:** Do not breathe gas / fumes / vapour / spray. **S 23:** Do not breathe gas. **S 23:** Do not breathe fumes. **S 23:** Do not breathe vapour. **S 23:** Do not breathe spray. **S 24:** Avoid contact with skin. **S 25:** Avoid contact with eyes. **S 26:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. **S 27:** Take off immediately all contaminated clothing. **S 28:** After contact with skin, wash immediately with plenty of **S 29:** Do not empty into drains. **S 30:** Never add water to this product. **S 33:** Take precautionary measures against static discharges. **S 35:** This material and its container must be disposed of in a safe way. **S 36:** Wear suitable protective clothing. **S 37:** Wear suitable gloves. **S 38:** In case of insufficient ventilation, wear suitable respiratory equipment. **S 39:** Wear eye / face protection. **S 40:** To clean the floor and all objects contaminated by this material, use **S 41:** In case of fire and / or explosion do not breathe fumes. **S 42:** During fumigation / spraying wear suitable respiratory equipment. **S 43:** In case of fire, use **S 43:** In case of fire, use Never use water. **S 45:** In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). **S 46:** If swallowed, seek medical advice immediately and show this container or label. **S 47:** Keep at temperature not exceeding ... °C. **S 48:** Keep wet with **S 49:** Keep only in the original container. **S 50:** Do not mix with **S 51:** Use only in well-ventilated areas. **S 52:** Not recommended for interior use on large surface areas. **S 53:** Avoid exposure – obtain special instructions before use. **S 56:** Dispose of this material and its container to hazardous or special waste collection point. **S 57:** Use appropriate container to avoid environmental contamination. **S 59:** Refer to manufacturer / supplier for information on recovery / recycling. **S 60:** This material and its container must be disposed of as hazardous waste. **S 61:** Avoid release to the environment. Refer to special instructions / Safety data sheets. **S 62:** If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. **S 63:** In case of accident by inhalation: remove casualty to fresh air and keep at rest. **S 64:** If swallowed, rinse mouth with water (only if the person is conscious). **S 1/2:** Keep locked up and out of the reach of children. **S 3/7:** Keep container tightly closed in a cool place. **S 3/9/14:** Keep in a cool, well-ventilated place away from **S 3/9/14/49:** Keep only in the original container in a cool, well-ventilated place away from **S 3/9/49:** Keep only in the original container in a cool, well-ventilated place. **S 3/14:** Keep in a cool

place away from **S 7/8:** Keep container tightly closed and dry. **S 7/9:** Keep container tightly closed and in a well-ventilated place. **S 7/47:** Keep container tightly closed and at a temperature not exceeding ... °C. **S 20/21:** When using do not eat, drink or smoke. **S 24/25:** Avoid contact with skin and eyes. **S 27/28:** After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of **S 29/35:** Do not empty into drains; dispose of this material and its container in a safe way. **S 29/56:** Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point. **S 36/37:** Wear suitable protective clothing and gloves. **S 36/37/39:** Wear suitable protective clothing, gloves and eye / face protection. **S 36/39:** Wear suitable protective clothing and eye / face protection. **S 37/39:** Wear suitable gloves and eye / face protection. **S 47/49:** Keep only in the original container at a temperature not exceeding ... °C.

Danish

Thanks to the extensive help of Rasmus Villemoes, the Danish phrases could be included. There were a couple typos in the official documents: We changed 'bebølse' to 'beboelse', 'omgående' to 'omgående' and 'producentesn' to 'producenten'.

R 1: Eksplosiv i tør tilstand. **R 2:** Eksplosionsfarlig ved stød, gnidning, ild eller andre antændelseskilder. **R 3:** Meget eksplosionsfarlig ved stød, gnidning, ild eller andre antændelseskilder. **R 4:** Danner meget følsomme eksplosive metalforbindelser. **R 5:** Eksplosionsfarlig ved opvarmning. **R 6:** Eksplosiv ved og uden kontakt med luft. **R 7:** Kan forårsage brand. **R 8:** Brandfarlig ved kontakt med brandbare stoffer. **R 9:** Eksplosionsfarlig ved blanding med brandbare stoffer. **R 10:** Brandfarlig. **R 11:** Meget brandfarlig. **R 12:** Yderst brandfarlig. **R 14:** Reagerer voldsomt med vand. **R 15:** Reagerer med vand under dannelse af yderst brandfarlige gasser. **R 16:** Eksplosionsfarlig ved blanding med oxiderende stoffer. **R 17:** Selvantændelig i luft. **R 18:** Ved brug kan brandbare dampe / eksplosive damp-luftblandinger dannes. **R 19:** Kan danne eksplosive peroxider. **R 20:** Farlig ved indånding. **R 21:** Farlig ved hudkontakt. **R 22:** Farlig ved indtagelse. **R 23:** Giftig ved indånding. **R 24:** Giftig ved hudkontakt. **R 25:** Giftig ved indtagelse. **R 26:** Meget giftig ved indånding. **R 27:** Meget giftig ved hudkontakt. **R 28:** Meget giftig ved indtagelse. **R 29:** Udvikler giftig gas ved kontakt med vand. **R 30:** Kan blive meget brandfarlig under brug. **R 31:** Udvikler giftig gas ved kontakt med syre. **R 32:** Udvikler meget giftig gas ved kontakt med syre. **R 33:** Kan ophobes i kroppen efter gentagen brug. **R 34:** Ætsningsfare. **R 35:** Alvorlig ætsningsfare. **R 36:** Irriterer øjnene. **R 37:** Irriterer åndedrætsorganerne. **R 38:** Irriterer huden. **R 39:** Fare for varig alvorlig skade på helbred. **R 40:** Mulighed for kræftfremkaldende effekt. **R 41:** Risiko for alvorlig øjensskade. **R 42:** Kan give overfølsomhed ved indånding. **R 43:** Kan give overfølsomhed ved kontakt med huden. **R 44:** Eksplosionsfarlig ved opvarmning under indeslutning. **R 45:** Kan fremkalde kræft. **R 46:** Kan forårsage arvelige genetiske skader. **R 48:** Alvorlig sundhedsfare ved længere tids påvirkning. **R 49:** Kan fremkalde kræft ved indånding. **R 50:** Meget giftig for organismer, der lever i vand. **R 51:** Giftig for organismer, der lever i vand. **R 52:** Skadelig for organismer, der lever i vand. **R 53:** Kan forårsage uønskede langtidsvirkninger i vandmiljøet. **R 54:** Giftig for planter. **R 55:** Giftig for dyr. **R 56:** Giftig for organismer i jordbunden. **R 57:** Giftig for bier. **R 58:** Kan forårsage uønskede langtidsvirkninger i miljøet. **R 59:** Farlig for ozonlaget. **R 60:** Kan skade forplantningsevnen. **R 61:** Kan skade barnet under graviditeten. **R 62:** Mulighed for skade på forplantningsevnen. **R 63:** Mulighed for skade på barnet under graviditeten. **R 64:** Kan skade børn i ammeperioden. **R 65:** Farlig; kan give lungeskade ved indtagelse. **R 66:** Gentagen udsættelse kan give tør eller revnet hud. **R 67:** Dampe kan give sløvhed og svimmelhed. **R 68:** Mulighed for varig skade på helbred. **R 14/15:** Reagerer voldsomt med vand under dannelse af yderst brandfarlige gasser. **R 15/29:** Reagerer med vand under dannelse af giftige og yderst brandfarlige gasser. **R 20/21:** Farlig ved indånding og ved hudkontakt. **R 20/22:** Farlig ved indånding og ved indtagelse. **R 20/21/22:** Farlig ved indånding, ved hudkontakt og ved indtagelse. **R 21/22:** Farlig ved hudkontakt og ved indtagelse. **R 23/24:** Giftig ved indånding og ved hudkontakt. **R 23/25:** Giftig ved

indånding og ved indtagelse. **R 23/24/25:** Giftig ved indånding, ved hudkontakt og ved indtagelse. **R 24/25:** Giftig ved hudkontakt og ved indtagelse. **R 26/27:** Meget giftig ved indånding og ved hudkontakt. **R 26/28:** Meget giftig ved indånding og ved indtagelse. **R 26/27/28:** Meget giftig ved indånding, ved hudkontakt og ved indtagelse. **R 27/28:** Meget giftig ved hudkontakt og ved indtagelse. **R 36/37:** Irriterer øjnene og åndedrætsorganerne. **R 36/38:** Irriterer øjnene og huden. **R 36/37/38:** Irriterer øjnene, åndedrætsorganerne og huden. **R 37/38:** Irriterer åndedrætsorganerne og huden. **R 39/23:** Giftig: fare for varig alvorlig skade på helbred ved indånding. **R 39/24:** Giftig: fare for varig alvorlig skade på helbred ved hudkontakt. **R 39/25:** Giftig: fare for varig alvorlig skade på helbred ved indtagelse. **R 39/23/24:** Giftig: fare for varig alvorlig skade på helbred ved indånding og hudkontakt. **R 39/23/25:** Giftig: fare for varig alvorlig skade på helbred ved indånding og indtagelse. **R 39/24/25:** Giftig: fare for varig alvorlig skade på helbred ved hudkontakt og indtagelse. **R 39/23/24/25:** Giftig: fare for varig alvorlig skade på helbred ved indånding, hudkontakt og indtagelse. **R 39/26:** Meget giftig: fare for varig alvorlig skade på helbred ved indånding. **R 39/27:** Meget giftig: fare for varig alvorlig skade på helbred ved hudkontakt. **R 39/28:** Meget giftig: fare for varig alvorlig skade på helbred ved indtagelse. **R 39/26/27:** Meget giftig: fare for varig alvorlig skade på helbred ved indånding og hudkontakt. **R 39/26/28:** Meget giftig: fare for varig alvorlig skade på helbred ved indånding og indtagelse. **R 39/27/28:** Meget giftig: fare for varig alvorlig skade på helbred ved hudkontakt og indtagelse. **R 39/26/27/28:** Meget giftig: fare for varig alvorlig skade på helbred ved indånding, hudkontakt og indtagelse. **R 42/43:** Kan give overfølsomhed ved indånding og ved kontakt med huden. **R 48/20:** Farlig: alvorlig sundhedsfare ved længere tids påvirkning ved indånding. **R 48/21:** Farlig: alvorlig sundhedsfare ved længere tids påvirkning ved hudkontakt. **R 48/22:** Farlig: alvorlig sundhedsfare ved længere tids påvirkning ved indtagelse. **R 48/20/21:** Farlig: alvorlig sundhedsfare ved længere tids påvirkning ved indånding og hudkontakt. **R 48/20/22:** Farlig: alvorlig sundhedsfare ved længere tids påvirkning ved indånding og indtagelse. **R 48/21/22:** Farlig: alvorlig sundhedsfare ved længere tids påvirkning ved hudkontakt og indtagelse. **R 48/20/21/22:** Farlig: alvorlig sundhedsfare ved længere tids påvirkning ved indånding, hudkontakt og indtagelse. **R 48/23:** Giftig: alvorlig sundhedsfare ved længere tids påvirkning ved indånding. **R 48/24:** Giftig: alvorlig sundhedsfare ved længere tids påvirkning ved hudkontakt. **R 48/25:** Giftig: alvorlig sundhedsfare ved længere tids påvirkning ved indtagelse. **R 48/23/24:** Giftig: alvorlig sundhedsfare ved længere tids påvirkning ved indånding og hudkontakt. **R 48/23/25:** Giftig: alvorlig sundhedsfare ved længere tids påvirkning ved indånding og indtagelse. **R 48/24/25:** Giftig: alvorlig sundhedsfare ved længere tids påvirkning ved hudkontakt og indtagelse. **R 48/23/24/25:** Giftig: alvorlig sundhedsfare ved længere tids påvirkning ved indånding, hudkontakt og indtagelse. **R 50/53:** Meget giftig for organismer, der lever i vand; kan forårsage uønskede langtidsvirkninger i vandmiljøet. **R 51/53:** Giftig for organismer, der lever i vand; kan forårsage uønskede langtidsvirkninger i vandmiljøet. **R 52/53:** Skadelig for organismer, der lever i vand; kan forårsage uønskede langtidsvirkninger i vandmiljøet. **R 68/20:** Farlig: mulighed for varig skade på helbred ved indånding. **R 68/21:** Farlig: mulighed for varig skade på helbred ved hudkontakt. **R 68/22:** Farlig: mulighed for varig skade på helbred ved indtagelse. **R 68/20/21:** Farlig: mulighed for varig skade på helbred ved indånding og hudkontakt. **R 68/20/22:** Farlig: mulighed for varig skade på helbred ved indånding og indtagelse. **R 68/21/22:** Farlig: mulighed for varig skade på helbred ved hudkontakt og indtagelse. **R 68/20/21/22:** Farlig: mulighed for varig skade på helbred ved indånding, hudkontakt og indtagelse.

S 1: Opbevares under lås. **S 2:** Opbevares utilgængeligt for børn. **S 3:** Opbevares køligt. **S 4:** Må ikke opbevares i nærheden af beboelse. **S 5:** Opbevares under **S 6:** Opbevares under **S 7:** Emballagen skal holdes tæt lukket. **S 8:** Emballagen skal opbevares tørt. **S 9:** Emballagen skal opbevares på et godt ventileret sted. **S 12:** Emballagen må ikke lukkes tæt. **S 13:** Må ikke opbevares sammen med fødevarer, drikkevarer og foderstoffer. **S 14:** Opbevares adskilt fra **S 15:** Må ikke udsættes for varme. **S 16:** Holdes væk fra antændelseskilder – Rygning forbudt. **S 17:** Holdes væk fra brandbare stoffer. **S 18:** Emballagen skal behandles og åbnes med forsigtighed. **S 20:** Der må ikke spises eller drikkes under brugen. **S 21:** Der må ikke ryges under brugen. **S 22:** Undgå indånding af støv. **S 23:** Undgå indånding af **S 23:** Undgå indånding af gas / røg / dampe / aerosol-tåger. **S 23:** Undgå indånding af gas. **S 23:** Undgå indånding af røg. **S 23:** Undgå ind-

ånding af dampe. **S 23:** Undgå indånding af aerosol-tåger. **S 24:** Undgå kontakt med huden. **S 25:** Undgå kontakt med øjnene. **S 26:** Kommer stoffet i øjnene, skylles straks grundigt med vand og læge kontaktes. **S 27:** Tilsmudset tøj tages straks af. **S 28:** Kommer stof på huden vaskes straks med store mængder **S 29:** Må ikke tømmes i kloakafløb. **S 30:** Hæld aldrig vand på eller i produktet. **S 33:** Træf foranstaltninger mod statisk elektricitet. **S 35:** Materialet og dets beholder skal bortskaffes på en sikker måde. **S 36:** Brug særligt arbejdstøj. **S 37:** Brug egnede beskyttelseshandsker under arbejdet. **S 38:** Brug egnet åndedrætsværn, hvis effektiv ventilation ikke er mulig. **S 39:** Brug beskyttelsesbriller / ansigtsskærm under arbejdet. **S 40:** Gulvet og tilsmudsede genstande renses med **S 41:** Undgå at indånde røgen ved brand eller eksplosion. **S 42:** Brug egnet åndedrætsværn ved rygning / sprøjtning. **S 43:** Brug ... ved brandslukning. **S 43:** Brug ... ved brandslukning. Brug ikke vand. **S 45:** Ved ulykkestilfælde eller ved ildebefindende er omgående lægebehandling nødvendig; vis etiketten, hvis det er muligt. **S 46:** Ved indtagelse, kontakt omgående læge og vis denne beholder eller etiket. **S 47:** Må ikke opbevares ved temperaturer på over ... °C. **S 48:** Holdes befugtet med **S 49:** Må kun opbevares i den originale emballage. **S 50:** Må ikke blandes med **S 51:** Må kun bruges på steder med god ventilation. **S 52:** Bør ikke anvendes til større flader i beboelses- eller opholdsrum. **S 53:** Undgå enhver kontakt – indhent særlige anvisninger før brug. **S 56:** Aflever dette materiale og dets beholder til et indsamlingssted for farligt affald og problemaffald. **S 57:** Skal indesluttet forsvarligt for at undgå miljøforurening. **S 59:** Indhent oplysninger om genvinding / genanvendelse hos producenten / leverandøren. **S 60:** Dette materiale og dets beholder skal bortskaffes som farligt affald. **S 61:** Undgå udledning til miljøet. Se særlig vejledning / leverandørbrugsanvisning. **S 62:** Ved indtagelse, undgå at fremprovokere opkastning: kontakt omgående læge og vis denne beholder eller etiket. **S 63:** Ved ulykkestilfælde ved indånding bringes tilskadekomne ud i frisk luft og holdes i ro. **S 64:** Ved indtagelse, skyl munden med vand (kun hvis personen er ved bevidsthed). **S 1/2:** Opbevares under lås og utilgængeligt for børn. **S 3/7:** Emballagen opbevares tæt lukket på et køligt sted. **S 3/9/14:** Opbevares køligt, godt ventileret og adskilt fra **S 3/9/14/49:** Må kun opbevares i originalemballagen på et køligt, godt ventileret sted og adskilt fra **S 3/9/49:** Må kun opbevares i originalemballagen på et køligt, godt ventileret sted. **S 3/14:** Opbevares køligt og adskilt fra **S 7/8:** Emballagen skal holdes tæt lukket og opbevares tørt. **S 7/9:** Emballagen skal holdes tæt lukket og opbevares på et godt ventileret sted. **S 7/47:** Emballagen skal holdes tæt lukket og opbevares ved temperaturer på ikke over ... °C. **S 20/21:** Der må ikke spises, drikkes eller ryges under brugen. **S 24/25:** Undgå kontakt med huden og øjnene. **S 27/28:** Kommer stof på huden, tages tilsmudset tøj straks af og der vaskes med store mængder **S 29/35:** Må ikke tømmes i kloakafløb; materialet og dets beholder skal bortskaffes på en sikker måde. **S 29/56:** Må ikke tømmes i kloakafløb, aflever dette materiale og dets beholder til et indsamlingssted for farligt affald og problemaffald. **S 36/37:** Brug særligt arbejdstøj og egnede beskyttelseshandsker. **S 36/37/39:** Brug særligt arbejdstøj, egnede beskyttelseshandsker og -briller / ansigtsskærm. **S 36/39:** Brug særligt arbejdstøj og egnede beskyttelsesbriller / ansigtsskærm. **S 37/39:** Brug egnede beskyttelseshandsker og -briller / ansigtsskærm under arbejdet. **S 47/49:** Må kun opbevares i originalemballagen ved en temperatur på ikke over ... °C.

French

Dominique Richard helped with the French phrases. Many thanks to him!

R 1 : Explosif à l'état sec. **R 2 :** Risque d'explosion par le choc, la friction, le feu ou d'autres sources d'ignition. **R 3 :** Grand risque d'explosion par le choc, la friction, le feu ou d'autres sources d'ignition. **R 4 :** Forme des composés métalliques explosifs très sensibles. **R 5 :** Danger d'explosion sous l'action de la chaleur. **R 6 :** Danger d'explosion en contact ou sans contact avec l'air. **R 7 :** Peut provoquer un incendie. **R 8 :** Favorise l'inflammation des matières combustibles. **R 9 :** Peut exploser en mélange avec des matières combustibles. **R 10 :** Inflammable. **R 11 :** Facilement inflammable. **R 12 :** Extrêmement inflammable. **R 14 :** Réagit violemment au contact de l'eau. **R 15 :** Au contact de l'eau, dégage des gaz extrêmement inflammables. **R 16 :** Peut exploser en mélange avec des substances comburantes. **R 17 :** Spontanément inflammable à l'air. **R 18 :**

Lors de l'utilisation, formation possible de mélange vapeur-air inflammable / explosif. **R 19** : Peut former des peroxydes explosifs. **R 20** : Nocif par inhalation. **R 21** : Nocif par contact avec la peau. **R 22** : Nocif en cas d'ingestion. **R 23** : Toxique par inhalation. **R 24** : Toxique par contact avec la peau. **R 25** : Toxique en cas d'ingestion. **R 26** : Très toxique par inhalation. **R 27** : Très toxique par contact avec la peau. **R 28** : Très toxique en cas d'ingestion. **R 29** : Au contact de l'eau, dégage des gaz toxiques. **R 30** : Peut devenir facilement inflammable pendant l'utilisation. **R 31** : Au contact d'un acide, dégage un gaz toxique. **R 32** : Au contact d'un acide, dégage un gaz très toxique. **R 33** : Danger d'effets cumulatifs. **R 34** : Provoque des brûlures. **R 35** : Provoque de graves brûlures. **R 36** : Irritant pour les yeux. **R 37** : Irritant pour les voies respiratoires. **R 38** : Irritant pour la peau. **R 39** : Danger d'effets irréversibles très graves. **R 40** : Effet cancérogène suspecté preuves insuffisantes. **R 41** : Risque de lésions oculaires graves. **R 42** : Peut entraîner une sensibilisation par inhalation. **R 43** : Peut entraîner une sensibilisation par contact avec la peau. **R 44** : Risque d'explosion si chauffé en ambiance confinée. **R 45** : Peut provoquer le cancer. **R 46** : Peut provoquer des altérations génétiques héréditaires. **R 48** : Risque d'effets graves pour la santé en cas d'exposition prolongée. **R 49** : Peut provoquer le cancer par inhalation. **R 50** : Très toxique pour les organismes aquatiques. **R 51** : Toxique pour les organismes aquatiques. **R 52** : Nocif pour les organismes aquatiques. **R 53** : Peut entraîner des effets néfastes à long terme pour l'environnement aquatique. **R 54** : Toxique pour la flore. **R 55** : Toxique pour la faune. **R 56** : Toxique pour les organismes du sol. **R 57** : Toxique pour les abeilles. **R 58** : Peut entraîner des effets néfastes à long terme pour l'environnement. **R 59** : Dangereux pour la couche d'ozone. **R 60** : Peut altérer la fertilité. **R 61** : Risque pendant la grossesse d'effets néfastes pour l'enfant. **R 62** : Risque possible d'altération de la fertilité. **R 63** : Risque possible pendant la grossesse d'effets néfastes pour l'enfant. **R 64** : Risque possible pour les bébés nourris au lait maternel. **R 65** : Nocif: peut provoquer une atteinte des poumons en cas d'ingestion. **R 66** : L'exposition répétée peut provoquer dessèchement ou gerçures de la peau. **R 67** : L'inhalation de vapeurs peut provoquer somnolence et vertiges. **R 68** : Possibilité d'effets irréversibles. **R 14/15** : Réagit violemment au contact de l'eau en dégageant des gaz extrêmement inflammables. **R 15/29** : Au contact de l'eau, dégage des gaz toxiques et extrêmement inflammables. **R 20/21** : Nocif par inhalation et par contact avec la peau. **R 20/22** : Nocif par inhalation et par ingestion. **R 20/21/22** : Nocif par inhalation, par contact avec la peau et par ingestion. **R 21/22** : Nocif par contact avec la peau et par ingestion. **R 23/24** : Toxique par inhalation et par contact avec la peau. **R 23/25** : Toxique par inhalation et par ingestion. **R 23/24/25** : Toxique par inhalation, par contact avec la peau et par ingestion. **R 24/25** : Toxique par contact avec la peau et par ingestion. **R 26/27** : Très toxique par inhalation et par contact avec la peau. **R 26/28** : Très toxique par inhalation et par ingestion. **R 26/27/28** : Très toxique par inhalation, par contact avec la peau et par ingestion. **R 27/28** : Très toxique par contact avec la peau et par ingestion. **R 36/37** : Irritant pour les yeux et les voies respiratoires. **R 36/38** : Irritant pour les yeux et la peau. **R 36/37/38** : Irritant pour les yeux, les voies respiratoires et la peau. **R 37/38** : Irritant pour les voies respiratoires et la peau. **R 39/23** : Toxique: danger d'effets irréversibles très graves par inhalation. **R 39/24** : Toxique: danger d'effets irréversibles très graves par contact avec la peau. **R 39/25** : Toxique: danger d'effets irréversibles très graves par ingestion. **R 39/23/24** : Toxique: danger d'effets irréversibles très graves par inhalation et par contact avec la peau. **R 39/23/25** : Toxique: danger d'effets irréversibles très graves par inhalation et par ingestion. **R 39/24/25** : Toxique: danger d'effets irréversibles très graves par contact avec la peau et par ingestion. **R 39/23/24/25** : Toxique: danger d'effets irréversibles très graves par inhalation, par contact avec la peau et par ingestion. **R 39/26** : Très toxique: danger d'effets irréversibles très graves par inhalation. **R 39/27** : Très toxique: danger d'effets irréversibles très graves par contact avec la peau. **R 39/28** : Très toxique: danger d'effets irréversibles très graves par ingestion. **R 39/26/27** : Très toxique: danger d'effets irréversibles très graves par inhalation et par contact avec la peau. **R 39/26/28** : Très toxique: danger d'effets irréversibles très graves par inhalation et par ingestion. **R 39/27/28** : Très toxique: danger d'effets irréversibles très graves par contact avec la peau et par ingestion. **R 39/26/27/28** : Très toxique: danger d'effets irréversibles très graves par inhalation, par contact avec la peau et par ingestion. **R 42/43** : Peut entraîner une sensibilisation par inhalation et par contact avec la peau. **R 48/20** : Nocif: risque d'effets graves pour la santé en cas d'exposition prolongée par inhalation. **R 48/21** : Nocif: risque d'effets graves pour la santé en cas d'exposition prolongée

par contact avec la peau. **R 48/22** : Nocif: risque d'effets graves pour la santé en cas d'exposition prolongée par ingestion. **R 48/20/21** : Nocif: risque d'effets graves pour la santé en cas d'exposition prolongée par inhalation et par contact avec la peau. **R 48/20/22** : Nocif: risque d'effets graves pour la santé en cas d'exposition prolongée par inhalation et par ingestion. **R 48/21/22** : Nocif: risque d'effets graves pour la santé en cas d'exposition prolongée par contact avec la peau et par ingestion. **R 48/20/21/22** : Nocif: risque d'effets graves pour la santé en cas d'exposition prolongée par inhalation, par contact avec la peau et par ingestion. **R 48/23** : Toxique: risque d'effets graves pour la santé en cas d'exposition prolongée par inhalation. **R 48/24** : Toxique: risque d'effets graves pour la santé en cas d'exposition prolongée par contact avec la peau. **R 48/25** : Toxique: risque d'effets graves pour la santé en cas d'exposition prolongée par ingestion. **R 48/23/24** : Toxique: risque d'effets graves pour la santé en cas d'exposition prolongée par inhalation et par contact avec la peau. **R 48/23/25** : Toxique: risque d'effets graves pour la santé en cas d'exposition prolongée par inhalation et par ingestion. **R 48/24/25** : Toxique: risque d'effets graves pour la santé en cas d'exposition prolongée par contact avec la peau et par ingestion. **R 48/23/24/25** : Toxique: risque d'effets graves pour la santé en cas d'exposition prolongée par inhalation, par contact avec la peau et par ingestion. **R 50/53** : Très toxique pour les organismes aquatiques, peut entraîner des effets néfastes à long terme pour l'environnement aquatique. **R 51/53** : Toxique pour les organismes aquatiques, peut entraîner des effets néfastes à long terme pour l'environnement aquatique. **R 52/53** : Nocif pour les organismes aquatiques, peut entraîner des effets néfastes à long terme pour l'environnement aquatique. **R 68/20** : Nocif: possibilité d'effets irréversibles par inhalation. **R 68/21** : Nocif: possibilité d'effets irréversibles par contact avec la peau. **R 68/22** : Nocif: possibilité d'effets irréversibles par ingestion. **R 68/20/21** : Nocif: possibilité d'effets irréversibles par inhalation et par contact avec la peau. **R 68/20/22** : Nocif: possibilité d'effets irréversibles par inhalation et par ingestion. **R 68/21/22** : Nocif: possibilité d'effets irréversibles par contact avec la peau et par ingestion. **R 68/20/21/22** : Nocif: possibilité d'effets irréversibles par inhalation, par contact avec la peau et par ingestion.

S 1 : Conserver sous clé. **S 2** : Conserver hors de la portée des enfants. **S 3** : Conserver dans un endroit frais. **S 4** : Conserver à l'écart de tout local d'habitation. **S 5** : Conserver sous **S 6** : Conserver sous **S 7** : Conserver le récipient bien fermé. **S 8** : Conserver le récipient à l'abri de l'humidité. **S 9** : Conserver le récipient dans un endroit bien ventilé. **S 12** : Ne pas fermer hermétiquement le récipient. **S 13** : Conserver à l'écart des aliments et boissons, y compris ceux pour animaux. **S 14** : Conserver à l'écart des **S 15** : Conserver à l'écart de la chaleur. **S 16** : Conserver à l'écart de toute flamme ou source d'étincelles - Ne pas fumer. **S 17** : Tenir à l'écart des matières combustibles. **S 18** : Manipuler et ouvrir le récipient avec prudence. **S 20** : Ne pas manger et ne pas boire pendant l'utilisation. **S 21** : Ne pas fumer pendant l'utilisation. **S 22** : Ne pas respirer les poussières. **S 23** : Ne pas respirer les **S 23** : Ne pas respirer les gaz / fumées / vapeurs / aérosols. **S 23** : Ne pas respirer les gaz. **S 23** : Ne pas respirer les fumées. **S 23** : Ne pas respirer les vapeurs. **S 23** : Ne pas respirer les aérosols. **S 24** : Éviter le contact avec la peau. **S 25** : Éviter le contact avec les yeux. **S 26** : En cas de contact avec les yeux, laver immédiatement et abondamment avec de l'eau et consulter un spécialiste. **S 27** : Enlever immédiatement tout vêtement souillé ou éclaboussé. **S 28** : Après contact avec la peau, se laver immédiatement et abondamment avec **S 29** : Ne pas jeter les résidus à l'égout. **S 30** : Ne jamais verser de l'eau dans ce produit. **S 33** : Éviter l'accumulation de charges électrostatiques. **S 35** : Ne se débarrasser de ce produit et de son récipient qu'en prenant toutes précautions d'usage. **S 36** : Porter un vêtement de protection approprié. **S 37** : Porter des gants appropriés. **S 38** : En cas de ventilation insuffisante, porter un appareil respiratoire approprié. **S 39** : Porter un appareil de protection des yeux / du visage. **S 40** : Pour nettoyer le sol ou les objets souillés par ce produit, utiliser **S 41** : En cas d'incendie et / ou d'explosion, ne pas respirer les fumées. **S 42** : Pendant les fumigations / pulvérisations, porter un appareil respiratoire approprié. **S 43** : En cas d'incendie, utiliser **S 43** : En cas d'incendie, utiliser Ne jamais utiliser d'eau. **S 45** : En cas d'accident ou de malaise, consulter immédiatement un médecin (si possible lui montrer l'étiquette). **S 46** : En cas d'ingestion, consulter immédiatement un médecin et lui montrer l'emballage ou l'étiquette. **S 47** : Conserver à une température ne dépassant pas ...°C. **S 48** : Maintenir

humide avec **S 49** : Conserver uniquement dans le récipient d'origine. **S 50** : Ne pas mélanger avec **S 51** : Utiliser seulement dans des zones bien ventilées. **S 52** : Ne pas utiliser sur de grandes surfaces dans les locaux habités. **S 53** : Éviter l'exposition - se procurer des instructions spéciales avant l'utilisation. **S 56** : Éliminer ce produit et son récipient dans un centre de collecte des déchets dangereux ou spéciaux. **S 57** : Utiliser un récipient approprié pour éviter toute contamination du milieu ambiant. **S 59** : Consulter le fabricant / fournisseur pour des informations relatives à la récupération / au recyclage. **S 60** : Éliminer le produit et son récipient comme un déchet dangereux. **S 61** : Éviter le rejet dans l'environnement Consulter les instructions spéciales / la fiche de données de sécurité. **S 62** : En cas d'ingestion, ne pas faire vomir Consulter immédiatement un médecin et lui montrer l'emballage ou l'étiquette. **S 63** : En cas d'accident par inhalation, transporter la victime hors de la zone contaminée et la garder au repos. **S 64** : En cas d'ingestion, rincer la bouche avec de l'eau (seulement si la personne est consciente). **S 1/2** : Conserver sous clef et hors de portée des enfants. **S 3/7** : Conserver le récipient bien fermé dans un endroit frais. **S 3/9/14** : Conserver dans un endroit frais et bien ventilé à l'écart des **S 3/9/14/49** : Conserver uniquement dans le récipient d'origine dans un endroit frais et bien ventilé à l'écart de **S 3/9/49** : Conserver uniquement dans le récipient d'origine dans un endroit frais et bien ventilé. **S 3/14** : Conserver dans un endroit frais à l'écart des **S 7/8** : Conserver le récipient bien fermé et à l'abri de l'humidité. **S 7/9** : Conserver le récipient bien fermé et dans un endroit bien ventilé. **S 7/47** : Conserver le récipient bien fermé et à une température ne dépassant pas ... °C. **S 20/21** : Ne pas manger, ne pas boire et ne pas fumer pendant l'utilisation. **S 24/25** : Éviter le contact avec la peau et les yeux. **S 27/28** : Après contact avec la peau, enlever immédiatement tout vêtement souillé ou éclaboussé et se laver immédiatement et abondamment avec **S 29/35** : Ne pas jeter les résidus à l'égout; ne se débarrasser de ce produit et de son récipient qu'en prenant toutes les précautions d'usage. **S 29/56** : Ne pas jeter les résidus à l'égout, éliminer ce produit et son récipient dans un centre de collecte des déchets dangereux ou spéciaux. **S 36/37** : Porter un vêtement de protection et des gants appropriés. **S 36/37/39** : Porter un vêtement de protection approprié, des gants et un appareil de protection des yeux / du visage. **S 36/39** : Porter un vêtement de protection approprié et un appareil de protection des yeux / du visage. **S 37/39** : Porter des gants appropriés et un appareil de protection des yeux / du visage. **S 47/49** : Conserver uniquement dans le récipient d'origine à une température ne dépassant pas ... °C.

German

I adapted the German R and S Phrases to the current ('new') spelling. Therefore, when writing a text in german and using rsphrase, you will get a warning ('Your current language setting is german, rsphrase only knows the current German spelling (ngerman) which therefore was used.').

R 1: In trockenem Zustand explosionsgefährlich. **R 2**: Durch Schlag, Reibung, Feuer oder andere Zündquellen explosionsgefährlich. **R 3**: Durch Schlag, Reibung, Feuer oder andere Zündquellen besonders explosionsgefährlich. **R 4**: Bildet hochempfindliche explosionsgefährliche Metallverbindungen. **R 5**: Beim Erwärmen explosionsfähig. **R 6**: Mit und ohne Luft explosionsfähig. **R 7**: Kann Brand verursachen. **R 8**: Feuergefahr bei Berührung mit brennbaren Stoffen. **R 9**: Explosionsgefahr bei Mischung mit brennbaren Stoffen. **R 10**: Entzündlich. **R 11**: Leicht entzündlich. **R 12**: Hoch entzündlich. **R 14**: Reagiert heftig mit Wasser. **R 15**: Reagiert mit Wasser unter Bildung hoch entzündlicher Gase. **R 16**: Explosionsgefährlich in Mischung mit Brand fördernden Stoffen. **R 17**: Selbstentzündlich an der Luft. **R 18**: Bei Gebrauch Bildung explosionsfähiger / leicht entzündlicher Dampf / Luft-Gemische möglich. **R 19**: Kann explosionsfähige Peroxide bilden. **R 20**: Gesundheitsschädlich beim Einatmen. **R 21**: Gesundheitsschädlich bei Berührung mit der Haut. **R 22**: Gesundheitsschädlich beim Verschlucken. **R 23**: Giftig beim Einatmen. **R 24**: Giftig bei Berührung mit der Haut. **R 25**: Giftig beim Verschlucken. **R 26**: Sehr giftig beim Einatmen. **R 27**: Sehr giftig bei Berührung mit der Haut. **R 28**: Sehr giftig beim Verschlucken. **R 29**: Entwickelt bei Berührung mit Wasser giftige Ga-

se. **R 30:** Kann bei Gebrauch leicht entzündlich werden. **R 31:** Entwickelt bei Berührung mit Säure giftige Gase. **R 32:** Entwickelt bei Berührung mit Säure sehr giftige Gase. **R 33:** Gefahr kumulativer Wirkungen. **R 34:** Verursacht Verätzungen. **R 35:** Verursacht schwere Verätzungen. **R 36:** Reizt die Augen. **R 37:** Reizt die Atmungsorgane. **R 38:** Reizt die Haut. **R 39:** Ernste Gefahr irreversiblen Schadens. **R 40:** Verdacht auf Krebs erzeugende Wirkung. **R 41:** Gefahr ernster Augenschäden. **R 42:** Sensibilisierung durch Einatmen möglich. **R 43:** Sensibilisierung durch Hautkontakt möglich. **R 44:** Explosionsgefahr bei Erhitzen unter Einschluss. **R 45:** Kann Krebs erzeugen. **R 46:** Kann vererbare Schäden verursachen. **R 48:** Gefahr ernster Gesundheitsschäden bei längerer Exposition. **R 49:** Kann Krebs erzeugen beim Einatmen. **R 50:** Sehr giftig für Wasserorganismen. **R 51:** Giftig für Wasserorganismen. **R 52:** Schädlich für Wasserorganismen. **R 53:** Kann in Gewässern längerfristig schädliche Wirkungen haben. **R 54:** Giftig für Pflanzen. **R 55:** Giftig für Tiere. **R 56:** Giftig für Bodenorganismen. **R 57:** Giftig für Bienen. **R 58:** Kann längerfristig schädliche Wirkungen auf die Umwelt haben. **R 59:** Gefährlich für die Ozonschicht. **R 60:** Kann die Fortpflanzungsfähigkeit beeinträchtigen. **R 61:** Kann das Kind im Mutterleib schädigen. **R 62:** Kann möglicherweise die Fortpflanzungsfähigkeit beeinträchtigen. **R 63:** Kann das Kind im Mutterleib möglicherweise schädigen. **R 64:** Kann Säuglinge über die Muttermilch schädigen. **R 65:** Gesundheitsschädlich: kann beim Verschlucken Lungenschäden verursachen. **R 66:** Wiederholter Kontakt kann zu spröder oder rissiger Haut führen. **R 67:** Dämpfe können Schläfrigkeit und Benommenheit verursachen. **R 68:** Irreversibler Schaden möglich. **R 14/15:** Reagiert heftig mit Wasser unter Bildung hoch entzündlicher Gase. **R 15/29:** Reagiert mit Wasser unter Bildung giftiger und hoch entzündlicher Gase. **R 20/21:** Gesundheitsschädlich beim Einatmen und bei Berührung mit der Haut. **R 20/22:** Gesundheitsschädlich beim Einatmen und Verschlucken. **R 20/21/22:** Gesundheitsschädlich beim Einatmen, Verschlucken und Berührung mit der Haut. **R 21/22:** Gesundheitsschädlich bei Berührung mit der Haut und beim Verschlucken. **R 23/24:** Giftig beim Einatmen und bei Berührung mit der Haut. **R 23/25:** Giftig beim Einatmen und Verschlucken. **R 23/24/25:** Giftig beim Einatmen, Verschlucken und Berührung mit der Haut. **R 24/25:** Giftig bei Berührung mit der Haut und beim Verschlucken. **R 26/27:** Sehr giftig beim Einatmen und bei Berührung mit der Haut. **R 26/28:** Sehr giftig beim Einatmen und Verschlucken. **R 26/27/28:** Sehr giftig beim Einatmen, Verschlucken und Berührung mit der Haut. **R 27/28:** Sehr giftig bei Berührung mit der Haut und beim Verschlucken. **R 36/37:** Reizt die Augen und die Atmungsorgane. **R 36/38:** Reizt die Augen und die Haut. **R 36/37/38:** Reizt die Augen, Atmungsorgane und die Haut. **R 37/38:** Reizt die Atmungsorgane und die Haut. **R 39/23:** Giftig: ernste Gefahr irreversiblen Schadens durch Einatmen. **R 39/24:** Giftig: ernste Gefahr irreversiblen Schadens bei Berührung mit der Haut. **R 39/25:** Giftig: ernste Gefahr irreversiblen Schadens durch Verschlucken. **R 39/23/24:** Giftig: ernste Gefahr irreversiblen Schadens durch Einatmen und bei Berührung mit der Haut. **R 39/23/25:** Giftig: ernste Gefahr irreversiblen Schadens durch Einatmen und durch Verschlucken. **R 39/24/25:** Giftig: ernste Gefahr irreversiblen Schadens bei Berührung mit der Haut und durch Verschlucken. **R 39/23/24/25:** Giftig: ernste Gefahr irreversiblen Schadens durch Einatmen, Berührung mit der Haut und durch Verschlucken. **R 39/26:** Sehr giftig: ernste Gefahr irreversiblen Schadens durch Einatmen. **R 39/27:** Sehr giftig: ernste Gefahr irreversiblen Schadens bei Berührung mit der Haut. **R 39/28:** Sehr giftig: ernste Gefahr irreversiblen Schadens durch Verschlucken. **R 39/26/27:** Sehr giftig: ernste Gefahr irreversiblen Schadens durch Einatmen und bei Berührung mit der Haut. **R 39/26/28:** Sehr giftig: ernste Gefahr irreversiblen Schadens durch Einatmen und durch Verschlucken. **R 39/27/28:** Sehr giftig: ernste Gefahr irreversiblen Schadens bei Berührung mit der Haut und durch Verschlucken. **R 39/26/27/28:** Sehr giftig: ernste Gefahr irreversiblen Schadens durch Einatmen, Berührung mit der Haut und durch Verschlucken. **R 42/43:** Sensibilisierung durch Einatmen und Hautkontakt möglich. **R 48/20:** Gesundheitsschädlich: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Einatmen. **R 48/21:** Gesundheitsschädlich: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Berührung mit der Haut. **R 48/22:** Gesundheitsschädlich: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Verschlucken. **R 48/20/21:** Gesundheitsschädlich: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Einatmen und durch Berührung mit der Haut. **R 48/20/22:** Gesundheitsschädlich: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Einatmen und durch Verschlucken. **R 48/21/22:** Gesundheitsschädlich: Gefahr ernster Gesundheitsschäden bei längerer

Exposition durch Berührung mit der Haut und durch Verschlucken. **R 48/20/21/22:** Gesundheitsschädlich: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Einatmen, Berührung mit der Haut und durch Verschlucken. **R 48/23:** Giftig: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Einatmen. **R 48/24:** Giftig: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Berührung mit der Haut. **R 48/25:** Giftig: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Verschlucken. **R 48/23/24:** Giftig: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Einatmen und durch Berührung mit der Haut. **R 48/23/25:** Giftig: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Einatmen und durch Verschlucken. **R 48/24/25:** Giftig: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Berührung mit der Haut und durch Verschlucken. **R 48/23/24/25:** Giftig: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Einatmen, Berührung mit der Haut und durch Verschlucken. **R 50/53:** Sehr giftig für Wasserorganismen, kann in Gewässern längerfristig schädliche Wirkungen haben. **R 51/53:** Giftig für Wasserorganismen, kann in Gewässern längerfristig schädliche Wirkungen haben. **R 52/53:** Schädlich für Wasserorganismen, kann in Gewässern längerfristig schädliche Wirkungen haben. **R 68/20:** Gesundheitsschädlich: Möglichkeit irreversiblen Schadens durch Einatmen. **R 68/21:** Gesundheitsschädlich: Möglichkeit irreversiblen Schadens bei Berührung mit der Haut. **R 68/22:** Gesundheitsschädlich: Möglichkeit irreversiblen Schadens durch Verschlucken. **R 68/20/21:** Gesundheitsschädlich: Möglichkeit irreversiblen Schadens durch Einatmen und bei Berührung mit der Haut. **R 68/20/22:** Gesundheitsschädlich: Möglichkeit irreversiblen Schadens durch Einatmen und durch Verschlucken. **R 68/21/22:** Gesundheitsschädlich: Möglichkeit irreversiblen Schadens bei Berührung mit der Haut und durch Verschlucken. **R 68/20/21/22:** Gesundheitsschädlich: Möglichkeit irreversiblen Schadens durch Einatmen, Berührung mit der Haut und durch Verschlucken.

S 1: Unter Verschluss aufbewahren. **S 2:** Darf nicht in die Hände von Kindern gelangen. **S 3:** Kühl aufbewahren. **S 4:** Von Wohnplätzen fern halten. **S 5:** Unter ... aufbewahren. **S 6:** Unter ... aufbewahren. **S 7:** Behälter dicht geschlossen halten. **S 8:** Behälter trocken halten. **S 9:** Behälter an einem gut gelüfteten Ort aufbewahren. **S 12:** Behälter nicht gasdicht verschließen. **S 13:** Von Nahrungsmitteln, Getränken und Futtermitteln fern halten. **S 14:** Von ... fern halten. **S 15:** Vor Hitze schützen. **S 16:** Von Zündquellen fern halten – Nicht rauchen. **S 17:** Von brennbaren Stoffen fern halten. **S 18:** Behälter mit Vorsicht öffnen und handhaben. **S 20:** Bei der Arbeit nicht essen und trinken. **S 21:** Bei der Arbeit nicht rauchen. **S 22:** Staub nicht einatmen. **S 23:** ... nicht einatmen. **S 23:** Gas / Rauch / Dampf / Aerosol nicht einatmen. **S 23:** Gas nicht einatmen. **S 23:** Rauch nicht einatmen. **S 23:** Dampf nicht einatmen. **S 23:** Aerosol nicht einatmen. **S 24:** Berührung mit der Haut vermeiden. **S 25:** Berührung mit den Augen vermeiden. **S 26:** Bei Berührung mit den Augen sofort gründlich mit Wasser abspülen und Arzt konsultieren. **S 27:** Beschmutzte, getränkte Kleidung sofort ausziehen. **S 28:** Bei Berührung mit der Haut sofort abwaschen mit viel **S 29:** Nicht in die Kanalisation gelangen lassen. **S 30:** Niemals Wasser hinzugießen. **S 33:** Maßnahmen gegen elektrostatische Aufladungen treffen. **S 35:** Abfälle und Behälter müssen in gesicherter Weise beseitigt werden. **S 36:** Bei der Arbeit geeignete Schutzkleidung tragen. **S 37:** Geeignete Schutzhandschuhe tragen. **S 38:** Bei unzureichender Belüftung Atemschutzgerät anlegen. **S 39:** Schutzbrille / Gesichtsschutz tragen. **S 40:** Fußboden und verunreinigte Gegenstände mit ... reinigen. **S 41:** Explosions- und Brandgase nicht einatmen. **S 42:** Beim Räuchern / Versprühen geeignetes Atemschutzgerät anlegen. **S 43:** Zum Löschen ... verwenden. **S 43:** Zum Löschen ... verwenden. Kein Wasser verwenden. **S 45:** Bei Unfall oder Unwohlsein sofort Arzt zuziehen (wenn möglich, dieses Etikett vorzeigen). **S 46:** Bei Verschlucken sofort ärztlichen Rat einholen und Verpackung oder Etikett vorzeigen. **S 47:** Nicht bei Temperaturen über ... °C aufbewahren. **S 48:** Feucht halten mit **S 49:** Nur im Originalbehälter aufbewahren. **S 50:** Nicht mischen mit **S 51:** Nur in gut gelüfteten Bereichen verwenden. **S 52:** Nicht großflächig für Wohn- und Aufenthaltsräume zu verwenden. **S 53:** Exposition vermeiden – vor Gebrauch besondere Anweisungen einholen. **S 56:** Dieses Produkt und seinen Behälter der Problemabfallentsorgung zuführen. **S 57:** Zur Vermeidung einer Kontamination der Umwelt geeigneten Behälter verwenden. **S 59:** Informationen zur Wiederverwendung / Wiederverwertung beim Hersteller / Lieferanten erfragen. **S 60:** Dieser Stoff und sein Behälter sind als gefährlicher Abfall zu ent-

sorgen. **S 61:** Freisetzung in die Umwelt vermeiden. Besondere Anweisungen einholen / Sicherheitsdatenblatt zu Rate ziehen. **S 62:** Bei Verschlucken kein Erbrechen herbeiführen. Sofort ärztlichen Rat einholen und Verpackung oder dieses Etikett vorzeigen. **S 63:** Bei Unfall durch Einatmen: Verunfallten an die frische Luft bringen und ruhigstellen. **S 64:** Bei Verschlucken Mund mit Wasser ausspülen (nur wenn Verunfallter bei Bewusstsein ist). **S 1/2:** Unter Verschluss und für Kinder unzugänglich aufbewahren. **S 3/7:** Behälter dicht geschlossen halten und an einem kühlen Ort aufbewahren. **S 3/9/14:** An einem kühlen, gut gelüfteten Ort, entfernt von ... aufbewahren. **S 3/9/14/49:** Nur im Originalbehälter an einem kühlen, gut gelüfteten Ort, entfernt von ... aufbewahren. **S 3/9/49:** Nur im Originalbehälter an einem kühlen, gut gelüfteten Ort aufbewahren. **S 3/14:** An einem kühlen, von ... entfernten Ort aufbewahren. **S 7/8:** Behälter trocken und dicht geschlossen halten. **S 7/9:** Behälter dicht geschlossen an einem gut gelüfteten Ort aufbewahren. **S 7/47:** Behälter dicht geschlossen und nicht bei Temperaturen über ... °C aufbewahren. **S 20/21:** Bei der Arbeit nicht essen, trinken, rauchen. **S 24/25:** Berührung mit den Augen und der Haut vermeiden. **S 27/28:** Bei Berührung mit der Haut beschmutzte, getränkte Kleidung sofort ausziehen und Haut sofort abwaschen mit viel **S 29/35:** Nicht in die Kanalisation gelangen lassen; Abfälle und Behälter müssen in gesicherter Weise beseitigt werden. **S 29/56:** Nicht in die Kanalisation gelangen lassen; dieses Produkt und seinen Behälter der Problemabfallentsorgung zuführen. **S 36/37:** Bei der Arbeit geeignete Schutzhandschuhe und Schutzkleidung tragen. **S 36/37/39:** Bei der Arbeit geeignete Schutzkleidung, Schutzhandschuhe und Schutzbrille / Gesichtsschutz tragen. **S 36/39:** Bei der Arbeit geeignete Schutzkleidung und Schutzbrille / Gesichtsschutz tragen. **S 37/39:** Bei der Arbeit geeignete Schutzhandschuhe und Schutzbrille / Gesichtsschutz tragen. **S 47/49:** Nur im Originalbehälter bei einer Temperatur von nicht über ... °C aufbewahren.

Italian

Italian phrases implemented by Lorenzo Vagnarelli. Copy-and-paste-ready. Thanks a lot.

R 1: Explosive when dry. **R 2:** Risk of explosion by shock, friction, fire or other sources of ignition. **R 3:** Extreme risk of explosion by shock, friction, fire or other sources of ignition. **R 4:** Forms very sensitive explosive metallic compounds. **R 5:** Heating may cause an explosion. **R 6:** Explosive with or without contact with air. **R 7:** May cause fire. **R 8:** Contact with combustible material may cause fire. **R 9:** Explosive when mixed with combustible material. **R 10:** Flammable. **R 11:** Highly flammable. **R 12:** Extremely flammable. **R 14:** Reacts violently with water. **R 15:** Contact with water liberates extremely flammable gases. **R 16:** Explosive when mixed with oxidizing substances. **R 17:** Spontaneously flammable in air. **R 18:** In use, may form flammable/explosive vapour-air mixture. **R 19:** May form explosive peroxides. **R 20:** Harmful by inhalation. **R 21:** Harmful in contact with skin. **R 22:** Harmful if swallowed. **R 23:** Toxic by inhalation. **R 24:** Toxic in contact with skin. **R 25:** Toxic if swallowed. **R 26:** Very toxic by inhalation. **R 27:** Very toxic in contact with skin. **R 28:** Very toxic if swallowed. **R 29:** Contact with water liberates toxic gas. **R 30:** Can become highly flammable in use. **R 31:** Contact with acids liberates toxic gas. **R 32:** Contact with acids liberates very toxic gas. **R 33:** Danger of cumulative effects. **R 34:** Causes burns. **R 35:** Causes severe burns. **R 36:** Irritating to eyes. **R 37:** Irritating to respiratory system. **R 38:** Irritating to skin. **R 39:** Danger of very serious irreversible effects. **R 40:** Limited evidence of a carcinogenic effect. **R 41:** Risk of serious damage to eyes. **R 42:** May cause sensitization by inhalation. **R 43:** May cause sensitization by skin contact. **R 44:** Risk of explosion if heated under confinement. **R 45:** May cause cancer. **R 46:** May cause heritable genetic damage. **R 48:** Danger of serious damage to health by prolonged exposure. **R 49:** May cause cancer by inhalation. **R 50:** Very toxic to aquatic organisms. **R 51:** Toxic to aquatic organisms. **R 52:** Harmful to aquatic organisms. **R 53:** May cause long-term adverse effects in the aquatic environment. **R 54:** Toxic to flora. **R 55:** Toxic to fauna. **R 56:** Toxic to soil organisms. **R 57:** Toxic to bees. **R 58:** May cause long-term adverse effects in the environment. **R 59:** Dangerous for the ozone layer. **R 60:** May impair fertility. **R 61:**

May cause harm to the unborn child. **R 62:** Possible risk of impaired fertility. **R 63:** Possible risk of harm to the unborn child. **R 64:** May cause harm to breastfed babies. **R 65:** Harmful: may cause lung damage if swallowed. **R 66:** Repeated exposure may cause skin dryness or cracking. **R 67:** Vapours may cause drowsiness and dizziness. **R 68:** Possible risk of irreversible effects. **R 14/15:** Reacts violently with water, liberating extremely flammable gases. **R 15/29:** Contact with water liberates toxic, extremely flammable gas. **R 20/21:** Harmful by inhalation and in contact with skin. **R 20/22:** Harmful by inhalation and if swallowed. **R 20/21/22:** Harmful by inhalation, in contact with skin and if swallowed. **R 21/22:** Harmful in contact with skin and if swallowed. **R 23/24:** Toxic by inhalation and in contact with skin. **R 23/25:** Toxic by inhalation and if swallowed. **R 23/24/25:** Toxic by inhalation, in contact with skin and if swallowed. **R 24/25:** Toxic in contact with skin and if swallowed. **R 26/27:** Very toxic by inhalation and in contact with skin. **R 26/28:** Very toxic by inhalation and if swallowed. **R 26/27/28:** Very toxic by inhalation, in contact with skin and if swallowed. **R 27/28:** Very toxic in contact with skin and if swallowed. **R 36/37:** Irritating to eyes and respiratory system. **R 36/38:** Irritating to eyes and skin. **R 36/37/38:** Irritating to eyes, respiratory system and skin. **R 37/38:** Irritating to respiratory system and skin. **R 39/23:** Toxic: danger of very serious irreversible effects through inhalation. **R 39/24:** Toxic: danger of very serious irreversible effects in contact with skin. **R 39/25:** Toxic: danger of very serious irreversible effects if swallowed. **R 39/23/24:** Toxic: danger of very serious irreversible effects through inhalation and in contact with skin. **R 39/23/25:** Toxic: danger of very serious irreversible effects through inhalation and if swallowed. **R 39/24/25:** Toxic: danger of very serious irreversible effects in contact with skin and if swallowed. **R 39/23/24/25:** Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. **R 39/26:** Very toxic: danger of very serious irreversible effects through inhalation. **R 39/27:** Very toxic: danger of very serious irreversible effects in contact with skin. **R 39/28:** Very toxic: danger of very serious irreversible effects if swallowed. **R 39/26/27:** Very toxic: danger of very serious irreversible effects through inhalation and in contact with skin. **R 39/26/28:** Very toxic: danger of very serious irreversible effects through inhalation and if swallowed. **R 39/27/28:** Very toxic: danger of very serious irreversible effects in contact with skin and if swallowed. **R 39/26/27/28:** Very toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. **R 42/43:** May cause sensitization by inhalation and skin contact. **R 48/20:** Harmful: danger of serious damage to health by prolonged exposure through inhalation. **R 48/21:** Harmful: danger of serious damage to health by prolonged exposure in contact with skin. **R 48/22:** Harmful: danger of serious damage to health by prolonged exposure if swallowed. **R 48/20/21:** Harmful: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin. **R 48/20/22:** Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. **R 48/21/22:** Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. **R 48/20/21/22:** Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. **R 48/23:** Toxic: danger of serious damage to health by prolonged exposure through inhalation. **R 48/24:** Toxic: danger of serious damage to health by prolonged exposure in contact with skin. **R 48/25:** Toxic: danger of serious damage to health by prolonged exposure if swallowed. **R 48/23/24:** Toxic: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin. **R 48/23/25:** Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. **R 48/24/25:** Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. **R 48/23/24/25:** Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. **R 50/53:** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. **R 51/53:** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. **R 52/53:** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. **R 68/20:** Harmful: possible risk of irreversible effects through inhalation. **R 68/21:** Harmful: possible risk of irreversible effects in contact with skin. **R 68/22:** Harmful: possible risk of irreversible effects if swallowed. **R 68/20/21:** Harmful: possible risk of irreversible effects through inhalation and in contact with skin. **R 68/20/22:** Harmful: possible risk of irreversible effects through inhalation and if swallowed. **R 68/21/22:** Harmful: possible

risk of irreversible effects in contact with skin and if swallowed. **R 68/20/21/22:** Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

S 1: Keep locked up. **S 2:** Keep out of the reach of children. **S 3:** Keep in a cool place. **S 4:** Keep away from living quarters. **S 5:** Keep contents under **S 6:** Keep under **S 7:** Keep container tightly closed. **S 8:** Keep container dry. **S 9:** Keep container in a well-ventilated place. **S 12:** Do not keep the container sealed. **S 13:** Keep away from food, drink and animal feedingstuffs. **S 14:** Keep away from **S 15:** Keep away from heat. **S 16:** Keep away from sources of ignition - No smoking. **S 17:** Keep away from combustible material. **S 18:** Handle and open container with care. **S 20:** When using do not eat or drink. **S 21:** When using do not smoke. **S 22:** Do not breathe dust. **S 23:** Do not breathe **S 23:** Do not breathe gas / fumes / vapour / spray. **S 23:** Do not breathe gas. **S 23:** Do not breathe fumes. **S 23:** Do not breathe vapour. **S 23:** Do not breathe spray. **S 24:** Avoid contact with skin. **S 25:** Avoid contact with eyes. **S 26:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. **S 27:** Take off immediately all contaminated clothing. **S 28:** After contact with skin, wash immediately with plenty of **S 29:** Do not empty into drains. **S 30:** Never add water to this product. **S 33:** Take precautionary measures against static discharges. **S 35:** This material and its container must be disposed of in a safe way. **S 36:** Wear suitable protective clothing. **S 37:** Wear suitable gloves. **S 38:** In case of insufficient ventilation, wear suitable respiratory equipment. **S 39:** Wear eye / face protection. **S 40:** To clean the floor and all objects contaminated by this material, use **S 41:** In case of fire and / or explosion do not breathe fumes. **S 42:** During fumigation / spraying wear suitable respiratory equipment. **S 43:** In case of fire, use **S 43:** In case of fire, use Never use water. **S 45:** In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). **S 46:** If swallowed, seek medical advice immediately and show this container or label. **S 47:** Keep at temperature not exceeding ... °C. **S 48:** Keep wet with **S 49:** Keep only in the original container. **S 50:** Do not mix with **S 51:** Use only in well-ventilated areas. **S 52:** Not recommended for interior use on large surface areas. **S 53:** Avoid exposure – obtain special instructions before use. **S 56:** Dispose of this material and its container to hazardous or special waste collection point. **S 57:** Use appropriate container to avoid environmental contamination. **S 59:** Refer to manufacturer / supplier for information on recovery / recycling. **S 60:** This material and its container must be disposed of as hazardous waste. **S 61:** Avoid release to the environment. Refer to special instructions / Safety data sheets. **S 62:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. **S 63:** In case of accident by inhalation: remove casualty to fresh air and keep at rest. **S 64:** If swallowed, rinse mouth with water (only if the person is conscious). **S 1/2:** Keep locked up and out of the reach of children. **S 3/7:** Keep container tightly closed in a cool place. **S 3/9/14:** Keep in a cool, well-ventilated place away from **S 3/9/14/49:** Keep only in the original container in a cool, well-ventilated place away from **S 3/9/49:** Keep only in the original container in a cool, well-ventilated place. **S 3/14:** Keep in a cool place away from **S 7/8:** Keep container tightly closed and dry. **S 7/9:** Keep container tightly closed and in a well-ventilated place. **S 7/47:** Keep container tightly closed and at a temperature not exceeding ... °C. **S 20/21:** When using do not eat, drink or smoke. **S 24/25:** Avoid contact with skin and eyes. **S 27/28:** After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of **S 29/35:** Do not empty into drains; dispose of this material and its container in a safe way. **S 29/56:** Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point. **S 36/37:** Wear suitable protective clothing and gloves. **S 36/37/39:** Wear suitable protective clothing, gloves and eye / face protection. **S 36/39:** Wear suitable protective clothing and eye / face protection. **S 37/39:** Wear suitable gloves and eye / face protection. **S 47/49:** Keep only in the original container at a temperature not exceeding ... °C.

Spanish

Ignacio Fernández Galván sent me the Spanish phrases copy-and-paste-ready. What a surprise! I was done in five minutes. Thanks a lot!

R 1: Explosivo en estado seco. **R 2:** Riesgo de explosión por choque, fricción, fuego u otras fuentes de ignición. **R 3:** Alto riesgo de explosión por choque, fricción, fuego u otras fuentes de ignición. **R 4:** Forma compuestos metálicos explosivos muy sensibles. **R 5:** Peligro de explosión en caso de calentamiento. **R 6:** Peligro de explosión, en contacto o sin contacto con el aire. **R 7:** Puede provocar incendios. **R 8:** Peligro de fuego en contacto con materias combustibles. **R 9:** Peligro de explosión al mezclar con materias combustibles. **R 10:** Inflamable. **R 11:** Fácilmente inflamable. **R 12:** Extremadamente inflamable. **R 14:** Reacciona violentamente con el agua. **R 15:** Reacciona con el agua liberando gases extremadamente inflamables. **R 16:** Puede explosionar en mezcla con sustancias comburentes. **R 17:** Se inflama espontáneamente en contacto con el aire. **R 18:** Al usarlo pueden formarse mezclas aire-vapor explosivas / inflamables. **R 19:** Puede formar peróxidos explosivos. **R 20:** Nocivo por inhalación. **R 21:** Nocivo en contacto con la piel. **R 22:** Nocivo por ingestión. **R 23:** Tóxico por inhalación. **R 24:** Tóxico en contacto con la piel. **R 25:** Tóxico por ingestión. **R 26:** Muy tóxico por inhalación. **R 27:** Muy tóxico en contacto con la piel. **R 28:** Muy tóxico por ingestión. **R 29:** En contacto con agua libera gases tóxicos. **R 30:** Puede inflamarse fácilmente al usarlo. **R 31:** En contacto con ácidos libera gases tóxicos. **R 32:** En contacto con ácidos libera gases muy tóxicos. **R 33:** Peligro de efectos acumulativos. **R 34:** Provoca quemaduras. **R 35:** Provoca quemaduras graves. **R 36:** Irrita los ojos. **R 37:** Irrita las vías respiratorias. **R 38:** Irrita la piel. **R 39:** Peligro de efectos irreversibles muy graves. **R 40:** Posibles efectos cancerígenos. **R 41:** Riesgo de lesiones oculares graves. **R 42:** Posibilidad de sensibilización por inhalación. **R 43:** Posibilidad de sensibilización en contacto con la piel. **R 44:** Riesgo de explosión al calentarlo en ambiente confinado. **R 45:** Puede causar cáncer. **R 46:** Puede causar alteraciones genéticas hereditarias. **R 48:** Riesgo de efectos graves para la salud en caso de exposición prolongada. **R 49:** Puede causar cáncer por inhalación. **R 50:** Muy tóxico para los organismos acuáticos. **R 51:** Tóxico para los organismos acuáticos. **R 52:** Nocivo para los organismos acuáticos. **R 53:** Puede provocar a largo plazo efectos negativos en el medio ambiente acuático. **R 54:** Tóxico para la flora. **R 55:** Tóxico para la fauna. **R 56:** Tóxico para los organismos del suelo. **R 57:** Tóxico para las abejas. **R 58:** Puede provocar a largo plazo efectos negativos en el medio ambiente. **R 59:** Peligroso para la capa de ozono. **R 60:** Puede perjudicar la fertilidad. **R 61:** Riesgo durante el embarazo de efectos adversos para el feto. **R 62:** Posible riesgo de perjudicar la fertilidad. **R 63:** Posible riesgo durante el embarazo de efectos adversos para el feto. **R 64:** Puede perjudicar a los niños alimentados con leche materna. **R 65:** Nocivo: si se ingiere puede causar daño pulmonar. **R 66:** La exposición repetida puede provocar sequedad o formación de grietas en la piel. **R 67:** La inhalación de vapores puede provocar somnolencia y vértigo. **R 68:** Posibilidad de efectos irreversibles. **R 14/15:** Reacciona violentamente con el agua, liberando gases extremadamente inflamables. **R 15/29:** En contacto con el agua, libera gases tóxicos y extremadamente inflamables. **R 20/21:** Nocivo por inhalación y en contacto con la piel. **R 20/22:** Nocivo por inhalación y por ingestión. **R 20/21/22:** Nocivo por inhalación, por ingestión y en contacto con la piel. **R 21/22:** Nocivo en contacto con la piel y por ingestión. **R 23/24:** Tóxico por inhalación y en contacto con la piel. **R 23/25:** Tóxico por inhalación y por ingestión. **R 23/24/25:** Tóxico por inhalación, por ingestión y en contacto con la piel. **R 24/25:** Tóxico en contacto con la piel y por ingestión. **R 26/27:** Muy tóxico por inhalación y en contacto con la piel. **R 26/28:** Muy tóxico por inhalación y por ingestión. **R 26/27/28:** Muy tóxico por inhalación, por ingestión y en contacto con la piel. **R 27/28:** Muy tóxico en contacto con la piel y por ingestión. **R 36/37:** Irrita los ojos y las vías respiratorias. **R 36/38:** Irrita los ojos y la piel. **R 36/37/38:** Irrita los ojos, la piel y las vías respiratorias. **R 37/38:** Irrita las vías respiratorias y la piel. **R 39/23:** Tóxico: peligro de efectos irreversibles muy graves por inhalación. **R 39/24:** Tóxico: peligro de efectos irreversibles muy graves por contacto con la piel. **R 39/25:** Tóxico: peligro de efectos irreversibles muy graves por ingestión. **R 39/23/24:** Tóxico: peligro de efectos irreversibles muy graves por inhalación y contacto con la piel. **R 39/23/25:** Tóxico: peligro de efectos irreversibles muy graves por inhalación e ingestión. **R 39/24/25:** Tó-

xico: peligro de efectos irreversibles muy graves por contacto con la piel e ingestión. **R 39/23/24/25:** Tóxico: peligro de efectos irreversibles muy graves por inhalación, contacto con la piel e ingestión. **R 39/26:** Muy tóxico: peligro de efectos irreversibles muy graves por inhalación. **R 39/27:** Muy tóxico: peligro de efectos irreversibles muy graves por contacto con la piel. **R 39/28:** Muy tóxico: peligro de efectos irreversibles muy graves por ingestión. **R 39/26/27:** Muy tóxico: peligro de efectos irreversibles muy graves por inhalación y contacto con la piel. **R 39/26/28:** Muy tóxico: peligro de efectos irreversibles muy graves por inhalación e ingestión. **R 39/27/28:** Muy tóxico: peligro de efectos irreversibles muy graves por contacto con la piel e ingestión. **R 39/26/27/28:** Muy tóxico: peligro de efectos irreversibles muy graves por inhalación, contacto con la piel e ingestión. **R 42/43:** Posibilidad de sensibilización por inhalación y por contacto con la piel. **R 48/20:** Nocivo: riesgo de efectos graves para la salud en caso de exposición prolongada por inhalación. **R 48/21:** Nocivo: riesgo de efectos graves para la salud en caso de exposición prolongada por contacto con la piel. **R 48/22:** Nocivo: riesgo de efectos graves para la salud en caso de exposición prolongada por ingestión. **R 48/20/21:** Nocivo: riesgo de efectos graves para la salud en caso de exposición prolongada por inhalación y contacto con la piel. **R 48/20/22:** Nocivo: riesgo de efectos graves para la salud en caso de exposición prolongada por inhalación e ingestión. **R 48/21/22:** Nocivo: riesgo de efectos graves para la salud en caso de exposición prolongada por contacto con la piel e ingestión. **R 48/20/21/22:** Nocivo: riesgo de efectos graves para la salud en caso de exposición prolongada por inhalación, contacto con la piel e ingestión. **R 48/23:** Tóxico: riesgo de efectos graves para la salud en caso de exposición prolongada por inhalación. **R 48/24:** Tóxico: riesgo de efectos graves para la salud en caso de exposición prolongada por contacto con la piel. **R 48/25:** Tóxico: riesgo de efectos graves para la salud en caso de exposición prolongada por ingestión. **R 48/23/24:** Tóxico: riesgo de efectos graves para la salud en caso de exposición prolongada por inhalación y contacto con la piel. **R 48/23/25:** Tóxico: riesgo de efectos graves para la salud en caso de exposición prolongada por inhalación e ingestión. **R 48/24/25:** Tóxico: riesgo de efectos graves para la salud en caso de exposición prolongada por contacto con la piel e ingestión. **R 48/23/24/25:** Tóxico: riesgo de efectos graves para la salud en caso de exposición prolongada por inhalación, contacto con la piel e ingestión. **R 50/53:** Muy tóxico para los organismos acuáticos, puede provocar a largo plazo efectos negativos en el medio ambiente acuático. **R 51/53:** Tóxico para los organismos acuáticos, puede provocar a largo plazo efectos negativos en el medio ambiente acuático. **R 52/53:** Nocivo para los organismos acuáticos, puede provocar a largo plazo efectos negativos en el medio ambiente acuático. **R 68/20:** Nocivo: posibilidad de efectos irreversibles por inhalación. **R 68/21:** Nocivo: posibilidad de efectos irreversibles por contacto con la piel. **R 68/22:** Nocivo: posibilidad de efectos irreversibles por ingestión. **R 68/20/21:** Nocivo: posibilidad de efectos irreversibles por inhalación y contacto con la piel. **R 68/20/22:** Nocivo: posibilidad de efectos irreversibles por inhalación e ingestión. **R 68/21/22:** Nocivo: posibilidad de efectos irreversibles por contacto con la piel e ingestión. **R 68/20/21/22:** Nocivo: posibilidad de efectos irreversibles por inhalación, contacto con la piel e ingestión.

S 1: Consérvese bajo llave. **S 2:** Manténgase fuera del alcance de los niños. **S 3:** Consérvese en lugar fresco. **S 4:** Manténgase lejos de locales habitados. **S 5:** Consérvese en **S 6:** Consérvese en **S 7:** Manténgase el recipiente bien cerrado. **S 8:** Manténgase el recipiente en lugar seco. **S 9:** Consérvese el recipiente en lugar bien ventilado. **S 12:** No cerrar el recipiente herméticamente. **S 13:** Manténgase lejos de alimentos, bebidas y piensos. **S 14:** Consérvese lejos de **S 15:** Conservar alejado del calor. **S 16:** Conservar alejado de toda llama o fuente de chispas – No fumar. **S 17:** Manténgase lejos de materias combustibles. **S 18:** Manipúlese y ábrase el recipiente con prudencia. **S 20:** No comer ni beber durante su utilización. **S 21:** No fumar durante su utilización. **S 22:** No respirar el polvo. **S 23:** No respirar los **S 23:** No respirar los gases / humos / vapores / aerosoles. **S 23:** No respirar los gases. **S 23:** No respirar los humos. **S 23:** No respirar los vapores. **S 23:** No respirar los aerosoles. **S 24:** Evítese el contacto con la piel. **S 25:** Evítese el contacto con los ojos. **S 26:** En caso de contacto con los ojos, lávense inmediata y abundantemente con agua y acúdase a un médico. **S 27:** Quítese inmediatamente la ropa manchada o salpicada. **S 28:** En caso de contacto con la piel, lávese inmediata y abundantemente con **S 29:** No tirar los residuos por el desagüe. **S 30:** No echar jamás agua a este producto. **S 33:** Evítese la acumulación de cargas electrostáticas. **S 35:** Elimínense los residuos del

producto y sus recipientes con todas las precauciones posibles. **S 36:** Úsese indumentaria protectora adecuada. **S 37:** Úsese guantes adecuados. **S 38:** En caso de ventilación insuficiente, úsese equipo respiratorio adecuado. **S 39:** Úsese protección para los ojos / la cara. **S 40:** Para limpiar el suelo y los objetos contaminados por este producto, úsese **S 41:** En caso de incendio y / o de explosión no respire los humos. **S 42:** Durante las fumigaciones / pulverizaciones, úsese equipo respiratorio adecuado. **S 42:** Durante las fumigaciones, úsese equipo respiratorio adecuado. **S 42:** Durante las pulverizaciones, úsese equipo respiratorio adecuado. **S 43:** En caso de incendio, utilizar **S 43:** En caso de incendio, utilizar No usar nunca agua. **S 45:** En caso de accidente o malestar, acúdase inmediatamente al médico (si es posible, muéstresele la etiqueta). **S 46:** En caso de ingestión, acúdase inmediatamente al médico y muéstresele la etiqueta o el envase. **S 47:** Consérvese a una temperatura no superior a ... °C. **S 48:** Consérvese húmedo con **S 49:** Consérvese únicamente en el recipiente de origen. **S 50:** No mezclar con **S 51:** Úsese únicamente en lugares bien ventilados. **S 52:** No usar sobre grandes superficies en locales habitados. **S 53:** Evítese la exposición – recábense instrucciones especiales antes del uso. **S 56:** Elimínense esta sustancia y su recipiente en un punto de recogida pública de residuos especiales o peligrosos. **S 57:** Utilícese un envase de seguridad adecuado para evitar la contaminación del medio ambiente. **S 59:** Remitirse al fabricante o proveedor para obtener información sobre su recuperación / reciclado. **S 60:** Elimínense el producto y su recipiente como residuos peligrosos. **S 61:** Evítese su liberación al medio ambiente. Recábense instrucciones específicas / las fichas de datos de seguridad. **S 62:** En caso de ingestión no provocar el vómito: acúdase inmediatamente al médico y muéstresele la etiqueta o el envase. **S 63:** En caso de accidente por inhalación, alejar a la víctima de la zona contaminada y mantenerla en reposo. **S 64:** En caso de ingestión, enjuáguese la boca con agua (solamente si la persona está consciente). **S 1/2:** Consérvese bajo llave y manténgase fuera del alcance de los niños. **S 3/7:** Consérvese el recipiente bien cerrado y en lugar fresco. **S 3/9/14:** Consérvese en lugar fresco y bien ventilado y lejos de **S 3/9/14/49:** Consérvese únicamente en el recipiente de origen, en lugar fresco y bien ventilado y lejos de **S 3/9/49:** Consérvese únicamente en el recipiente de origen, en lugar fresco y bien ventilado. **S 3/14:** Consérvese en lugar fresco y lejos de **S 7/8:** Manténgase el recipiente bien cerrado y en lugar seco. **S 7/9:** Manténgase el recipiente bien cerrado y en lugar bien ventilado. **S 7/47:** Manténgase el recipiente bien cerrado y consérvese a una temperatura no superior a ... °C. **S 20/21:** No comer, ni beber, ni fumar durante su utilización. **S 24/25:** Evítese el contacto con los ojos y la piel. **S 27/28:** Después del contacto con la piel, quítese inmediatamente toda la ropa manchada o salpicada y lávese inmediata y abundantemente con **S 29/35:** No tirar los residuos por el desagüe; elimínense los residuos del producto y sus recipientes con todas las precauciones posibles. **S 29/56:** No tirar los residuos por el desagüe; elimínense esta sustancia y su recipiente en un punto de recogida pública de residuos especiales o peligrosos. **S 36/37:** Úsese indumentaria y guantes de protección adecuados. **S 36/37/39:** Úsese indumentaria y guantes adecuados y protección para los ojos / la cara. **S 36/39:** Úsese indumentaria adecuada y protección para los ojos / la cara. **S 37/39:** Úsese guantes adecuados y protección para los ojos / la cara. **S 47/49:** Consérvese únicamente en el recipiente de origen y a temperatura no superior a ... °C.