GHSYSTEM

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Globally Harmonized System of Classification and Labelling of Chemicals

Clemens Niederberger

https://github.com/cgnieder/ghsystem/
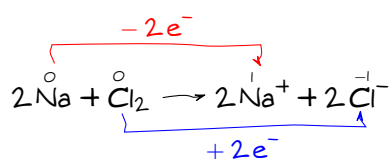
contact@mychemistry.eu

$$2\,\overset{o}{Na} + \overset{o}{Cl}_2 \longrightarrow 2\,\overset{1}{Na}{}^{+} + 2\,\overset{-1}{Cl}{}^{-}$$

$-2\,e^-$

$+2\,e^-$

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1 Introduction

As a chemist you are probably aware of the fact that the United Nations have developed the Globally Harmonized System of Classification and Labelling of Chemicals (ghs) as a global replacement for the various different systems in different countries. While it has not been implemented by all countries yet [Uni12], it is only a matter of time.

The package ghsystem now enables you to typeset all the hazard and precautionary statements and pictograms in a very easy way. The statements are taken from EU regulation

1272/2008 [EuP].

2 Licence and Requirements

Permission is granted to copy, distribute and/or modify this software under the terms of the LaTeX Project Public License (LPPL), version 1.3 or later (`http://www.latex-project.org/lppl.txt`). The software has the status "maintained."

GHSYSTEM loads the following packages: expl3[1] [L3Pa], xparse and l3keys2e[2] [L3Pb], chemmacros[3] [Nie17], translations[4] [Nie17], siunitx[5] [Wri18], graphicx[6] [Car17], longtable[7] [Car19] and ifpdf[8] [L3P18].

3 Setup

4 Get Hazard and Precautionary Statements

4.1 Simple Statements

The general usage is simple: you use the command

`\ghs*[⟨options⟩]{⟨type⟩}{⟨number⟩}`
Get statement number ⟨*number*⟩ of type ⟨*type*⟩.

There are three types available: h, euh and p. The ⟨*type*⟩ argument is case insensitive, so just type them in as you like.

```
1 \ghs{h}{200} \par
2 \ghs{H}{224} \par
3 \ghs{euh}{001} \par
4 \ghs{Euh}{202} \par
5 \ghs{p}{201}
```

H200: Unstable explosives.
H224: Extremely flammable liquid and vapour.
EUH001: Explosive when dry.
EUH202: Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.
P201: Obtain special instructions before use.

The starred version hides the identifier and only gives the statement. If you want to hide the statement itself instead you can use the option:

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1. on CTAN as l3kernel: `http://mirrors.ctan.org/macros/latex/contrib/l3kernel/`
2. on CTAN as l3packages: `http://mirrors.ctan.org/macros/latex/contrib/l3packages/`
3. on CTAN as chemmacros: `http://mirrors.ctan.org/macros/latex/contrib/chemmacros/`
4. on CTAN as translations: `http://mirrors.ctan.org/macros/latex/contrib/translations/`
5. on CTAN as siunitx: `http://mirrors.ctan.org/macros/latex/contrib/siunitx/`
6. on CTAN as graphicx: `http://mirrors.ctan.org/macros/latex/contrib/graphicx/`
7. on CTAN as longtable: `http://mirrors.ctan.org/macros/latex/contrib/longtable/`
8. on CTAN as ifpdf: `http://mirrors.ctan.org/macros/latex/contrib/ifpdf/`

hide = <u>true</u>|false   Default: `false`
  Hide the statement.

There is an option to customize the output, too.

space = {⟨*space command*⟩}   (initially empty)
  Space between ⟨*type*⟩ and ⟨*number*⟩.

```
1 \ghs{h}{200} \par
2 \ghs[space=\,]{h}{200} \par
3 \ghs*{h}{200} \par
4 \ghs[hide]{h}{200}
```

H200: Unstable explosives.
H 200: Unstable explosives.
Unstable explosives.
H200

4.2 Statements with Placeholders

Some of the statements contain placeholders. They can be one of the following:

- *<state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>*

- *<state specific effect if known>*

- *<or state all organs affected, if known>*

- *<name of sensitising substance>*

Except the last one which needs to be filled in, they are hidden per default. They can be made visible with the option

fill-in = <u>true</u>|false   Default: `false`
  Show placeholders.

```
1 \ghs{h}{340} \par
2 \ghs[fill-in]{h}{340} \par
3 \ghs{h}{360} \par
4 \ghs[fill-in]{h}{360} \par
5 \ghs{h}{370} \par
6 \ghs[fill-in]{h}{370} \par
7 \ghs{euh}{208} \par
8 \ghs[fill-in]{euh}{208}
```

H340: May cause genetic defects.
H340: May cause genetic defects. ⟨*state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard*⟩
H360: May damage fertility or the unborn child.

> 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*⟩
> H370: Causes damage to organs.
> 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*⟩
> EUH208: Contains ⟨*name of sensitising substance*⟩. May produce an allergic reaction.
> EUH208: Contains ⟨*name of sensitising substance*⟩. May produce an allergic reaction.

These placeholders can be replaced with one of these options:

exposure = {⟨*text*⟩}   (initially empty)
    exposure placeholder

effect = {⟨*text*⟩}   (initially empty)
    effect placeholder

organs = {⟨*text*⟩}   (initially empty)
    organ placeholder

substance = {⟨*text*⟩}   (initially empty)
    substance placeholder

```
1 \ghs[exposure=This is how you get exposed.]{h}{340} \par
2 \ghs[effect=These are the effects.]{h}{360} \par
3 \ghs[organs=to this organ]{h}{370} \par
4 \ghs[substance=substance]{euh}{208}
```

> H340: May cause genetic defects. This is how you get exposed.
> H360: May damage fertility or the unborn child. These are the effects.
> H370: Causes damage to this organ.
> EUH208: Contains substance. May produce an allergic reaction.

4.3 Statements with Gaps

Some of the statements have gaps that can be filled.

```
1 \ghs{p}{301} \par
2 \ghs{p}{401} \par
3 \ghs{p}{411} \par
4 \ghs{p}{413}
```

> P301: IF SWALLOWED:
> P401: Store …
> P411: Store at temperatures not exceeding °C/°F.
> P413: Store bulk masses greater than kg/ lbs at temperatures not exceeding °C/°F.

These gaps can be filled using these options:

`text` = {⟨*text*⟩}
  Fill the `text` gap.

`dots` = {⟨*text*⟩}
  Fill the `dots` gap.

`C-temperature` = {⟨*num*⟩}
  Fill the Celsius temperature gap.

`F-temperature` = {⟨*num*⟩}
  Fill the Fahrenheit temperature gap.

`kg-mass` = {⟨*num*⟩}
  Fill the kg mass gap.

`lbs-mass` = {⟨*num*⟩}
  Fill the lbs mass gap.

```
1 \ghs[text=contact physician!]{p}{301} \par
2 \ghs[dots=here]{p}{401} \par
3 \ghs[C-temperature=50, F-temperature=122]{p}{411} \par
4 \ghs[kg-mass=5.0, lbs-mass=11, C-temperature=50, F-temperature=122]{p}{413}
```
- -

P301: IF SWALLOWED: contact physician!
P401: Store here
P411: Store at temperatures not exceeding 50 °C/122 °F.
P413: Store bulk masses greater than 5.0 kg/11 lbs at temperatures not exceeding 50 °C/
122 °F.

4.4 Combined Statements

There are some combinations of statements. They are input with a + between the numbers:

```
1 \ghs{p}{235+410} \\
2 \ghs{p}{301+330+331}
```
- -

P235 + P410: Keep cool. Protect from sunlight.
P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomitting.

Note that you can only get combinations that officially exist. *You can't combine freely.*

5 Pictograms

5.1 The Pictures

The GHS defines a number of pictograms:

\ghspic[⟨*options*⟩]{⟨*name*⟩}
  Load pictogram ⟨*name*⟩.

Table 1 shows all available pictograms and their names. To be more precise: it shows the names to use with the \ghspic command. The file names are ghsystem_⟨*name*⟩.⟨*filetype*⟩ where ⟨*filetype*⟩ is eps, pdf, jpg or png, see also section 5.2.

```
1 \ghspic{skull}
```

If you don't like the default size you can change it using this option:

scale = {⟨*factor*⟩}   Default: 1
  Scales the pictogram.

The pictures are actually quite large. The default setting scales them by a factor of $\frac{1}{20}$.

```
1 \ghspic[scale=2]{skull}
```

If you want to use some specific \includegraphics options, *e. g.*, if you want to rotate the pictogram for some reason, use this option:

includegraphics = {⟨*includegraphics keyvals*⟩}
  Pass options to the underlying \includegraphics command.

```
1 \ghspic[includegraphics={angle=90}]{skull}
```

TABLE 1: All available GHS pictograms.

name	pictogram	name	pictogram
explos		explos-1	
explos-2		explos-3	
explos-4		explos-5	
explos-6			
flame		flame-2-white	
flame-2-black		flame-3-white	
flame-3-black		flame-4-1	
flame-4-2		flame-4-3-white	
flame-4-3-black		flame-5-2-white	
flame-5-2-black			
flame-0		flame-0-5-1	
bottle		bottle-2-black	
bottle-2-white			

name	pictogram	name	pictogram
acid		acid-8	
skull		skull-2	
skull-6			
exclam			
health			
aqpol			

5.2 Picture Type Depending on Engine

As you probably know you can't use every picture type with every compiler engine. pdfTeX in DVI mode *needs* eps pictures while pdfTeX in PDF mode, X∃TeX and LuaTeX convert eps pictures into pdf files, given they have the rights to write in the directory the pictures are saved in.

However, the latter can include jpg and png without any problems, while pdfTeX in DVI mode can't.

To resolve this GHSYSTEM tests which engine is used and if pdfTeX which mode is used and then chooses either eps or pdf for the pictograms. You are free to choose the picture type yourself with the option

pic-type = eps|pdf|jpg|png
Choose the picture type.

6 Available Languages

Right now the H and P statements are available in English, French,[9] German, Italian[10] and Spanish.[11] The package adapts chemmacros' option language or if the option hasn't been used recognizes the language settings made with babel or polyglossia. To be more precise: the

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9. Thanks to Bréal Frédéric and Beaude Aurélien!
10. Thanks to Jonas Rivetti!
11. Thanks to Ignacio Fernández Galván!

language selected at begin document is recognized. Later changes won't affect GHSYSTEM. If you want to use different languages you have to use GHSYSTEM's language option then.

You can also choose the language explicitly.

language = {⟨*lang*⟩}   Default: english
Selects a language and if called in the preamble also loads the necessary language file if it hasn't been loaded, yet. If the chosen file doesn't exist it falls back to english. Currently available choices are English, French, German, Italian, and Spanish. ⟨*lang*⟩ can be a comma separated list. Then the last language in the list will be the active one. If you plan to switch languages within the document then you should make sure to load all needed languages in the preamble first.

```
1 \ghs{h}{201}
2
3 \ghssetup{language=german}
4 \ghs{h}{201}
```
H201: Explosive; mass explosion hazard.
H201: Explosive; mass explosion hazard.

I will add other languages some time in future. This may take a while, though. If you would be willing to contribute and write the statements of another language please feel free to contact me.[12] Your TeX distribution should contain a file ghsystem_langtemplate.def which *should* explain all immediate questions and can be used as a basis for a new language file.

7 List of All Statements

If for some reason you want to list all sentences you can use

\ghslistall[⟨*options*⟩]
Print a table with all defined statements.

This command has a number of options to customize the table, which is created with the longtable environment of the longtable package.

table-head-number = {⟨*text*⟩}   Default: Identifier
The table head for the number.

table-head-text = {⟨*text*⟩}   Default: Statement
The table head for the statement.

table-next-page = {⟨*text*⟩}   Default: continues on next page
The hint for a next page.

table-caption = {⟨*text*⟩}   Default: All H, EUH, and P Statements.
The ⟨*text*⟩ in \caption{⟨*text*⟩}.

table-caption-short = {⟨*short text*⟩}   (initially empty)
The ⟨*short text*⟩ in \caption[⟨*short text*⟩]{⟨*text*⟩}.

---

12. contact@mychemistry.eu

table-label = {⟨*text*⟩}   Default: tab:ghs-hp-statements
   The label to refer to the table with \ref and similar commands.

table-row-sep = {⟨*dim*⟩}   Default: 3pt
   The separation of the table rows. A TEX dimension.

table-rules = <u>default</u>|booktabs|none   Default: default
   The style of the horizontal rules in the table. default uses \hline, booktabs uses \toprule,
   \midrule and \bottomrule, resp. This option needs the booktabs package which you have to
   load yourself then.

table-top-head-rule = <u>default</u>|booktabs|none   Default: default
   Change top rule explicitly.

table-head-rule = <u>default</u>|booktabs|none   Default: default
   Change rule below head explicitly.

table-foot-rule = <u>default</u>|booktabs|none   Default: default
   Change foot rule explicitly.

table-last-foot-rule = <u>default</u>|booktabs|none   Default: default
   Change last foot rule explicitly.

   The code below shows how table 2 was created:

```
1 \ghslistall[fill-in,table-rules=booktabs]
```

TABLE 2: All H, EUH, and P Statements.

Identifier	Statement
H200	Unstable explosives.
H201	Explosive; mass explosion hazard.
H202	Explosive, severe projection hazard.
H203	Explosive; fire, blast or projection hazard.
H204	Fire or projection hazard.
H205	May mass explode in fire.
H220	Extremely flammable gas.
H221	Flammable gas.
H222	Extremely flammable aerosol.
H223	Flammable aerosol.

Identifier	Statement
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H240	Heating may cause an explosion.
H241	Heating may cause a fire or explosion.
H242	Heating may cause a fire.
H250	Catches fire spontaneously if exposed to air.
H251	Self-heating: may catch fire.
H252	Self-heating in large quantities; may catch fire.
H260	In contact with water releases flammable gases which may ignite spontaneously.
H261	In contact with water releases flammable gases.
H270	May cause or intensify fire; oxidiser.
H271	May cause fire or explosion; strong oxidiser.
H272	May intensify fire; oxidiser.
H280	Contains gas under pressure; may explode if heated.
H281	Contains refrigerated gas; may cause cryogenic burns or injury.
H290	May be corrosive to metals.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.

Identifier	Statement
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms orbreathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects. ⟨*state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard*⟩
H341	Suspected of causing genetic defects. ⟨*state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard*⟩
H350	May cause cancer. ⟨*state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard*⟩
H351	Suspected of causing cancer. ⟨*state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard*⟩
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*⟩
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*⟩
H362	May cause harm to breast-fed children.
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*⟩
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*⟩
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*⟩
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*⟩
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Identifier	Statement
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
H350i	May cause cancer by inhalation.
H360F	May damage fertility.
H360D	May damage the unborn child.
H361f	Suspected of damaging fertility.
H361d	Suspected of damaging the unborn child.
H360FD	May damage fertility. May damage the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H360Fd	May damage fertility. Suspected of damaging the unborn child.
H360Df	May damage the unborn child. Suspected of damaging fertility.
EUH001	Explosive when dry.
EUH006	Explosive with or without contact with air.
EUH014	Reacts violently with water.
EUH018	In use may form flammable/explosive vapour-air mixture.
EUH019	May form explosive peroxides.
EUH044	Risk of explosion if heated under confinement.
EUH029	Contact with water liberates toxic gas.
EUH031	Contact with acids liberates toxic gas.
EUH032	Contact with acids liberates very toxic gas.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH070	Toxic by eye contact.
EUH071	Corrosive to the respiratory tract.
EUH059	Hazardous to the ozone layer.
EUH201	Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.
EUH201A	Warning! contains lead.
EUH202	Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.
EUH203	Contains chromium (VI). May produce an allergic reaction.
EUH204	Contains isocyanates. May produce an allergic reaction.
EUH205	Contains epoxy constituents. May produce an allergic reaction.

Identifier	Statement
EUH206	Warning! Do not use together with other products. May release dangerous gases (chlorine).
EUH207	Warning! Contains cadmium. Dangerous fumes are formed during use. See information supplied by the manufacturer. Comply with the safety instructions.
EUH208	Contains ⟨*name of sensitising substance*⟩. May produce an allergic reaction.
EUH209	Can become highly flammable in use.
EUH209A	Can become flammable in use.
EUH210	Safety data sheet available on request.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P211	Do not spray on an open flame or other ignition source.
P220	Keep/Store away from clothing/…/combustible materials.
P221	Take any precaution to avoid mixing with combustibles …
P222	Do not allow contact with air.
P223	Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P230	Keep wetted with …
P231	Handle under inert gas.
P232	Protect from moisture.
P233	Keep container tightly closed.
P234	Keep only in original container.
P235	Keep cool.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/… equipment.
P242	Use only non-sparking tools.

Identifier	Statement
P243	Take precautionary measures against static discharge.
P244	Keep reduction valves free from grease and oil.
P250	Do not subject to grinding/shock/.../friction.
P251	Pressurized container: Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P263	Avoid contact during pregnancy/while nursing.
P264	Wash ... thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P282	Wear cold insulating gloves/face shield/eye protection.
P283	Wear fire/flame resistant/retardant clothing.
P284	Wear respiratory protection.
P285	In case of inadequate ventilation wear respiratory protection.
P231 + P232	Handle under inert gas. Protect from moisture.
P235 + P410	Keep cool. Protect from sunlight.
P301	IF SWALLOWED:
P302	IF ON SKIN:
P303	IF ON SKIN (or hair):
P304	IF INHALED:
P305	IF IN EYES:
P306	IF ON CLOTHING:
P307	IF exposed:
P308	IF exposed or concerned:
P309	IF exposed or if you feel unwell:
P310	Immediately call a POISON CENTER or doctor/physician.
P311	Call a POISON CENTER or doctor/physician.

Identifier	Statement
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P313	Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P315	Get immediate medical advice/attention.
P320	Specific treatment is urgent (see … on this label).
P321	Specific treatment (see … on this label).
P322	Specific measures (see … on this label).
P330	Rinse mouth.
P331	Do NOT induce vomitting.
P332	If skin irritation occurs:
P333	If skin irritation or rash occurs:
P334	Immerse in cool water/wrap in wet bandages.
P335	Brush off loose particles from skin.
P336	Thaw frosted parts with lukewarm water. Do not rub affected area.
P337	If eye irritation persists:
P338	Remove contact lenses, if present and easy to do. Continue rinsing.
P340	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P341	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342	If experiencing respiratory symptoms:
P350	Gently wash with plenty of soap and water.
P351	Rinse cautiously with water for several minutes.
P352	Wash with plenty of soap and water.
P353	Rinse skin with water/shower.
P360	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P361	Remove/Take off immediately all contaminated clothing.
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P370	In case of fire:
P371	In case of major fire and large quantities:
P372	Explosion risk in case of fire.
P373	DO NOT fight fire when fire reaches explosives.

Identifier	Statement
P374	Fight fire with normal precautions from a reasonable distance.
P375	Fight fire remotely due to the risk of explosion.
P376	Stop leak if safe to do so.
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P378	Use . . . for extinction.
P380	Evacuate area.
P381	Eliminate all ignition sources if safe to do so.
P390	Absorb spillage to prevent material damage.
P391	Collect spillage.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomitting.
P302 + P334	IF ON SKIN: Immerse in cool water/wrap in wet bandages.
P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P304 + P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
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 + P360	IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P307 + P311	IF exposed: Call a POISON CENTER or doctor/physician.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P309 + P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Identifier	Statement
P335 + P334	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P370 + P376	In case of fire: Stop leak if safe to do so.
P370 + P378	In case of fire: Use … for extinction.
P370 + P380	In case of fire: Evacuate area.
P370 + P380 + P375	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
P371 + P380 + P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P401	Store …
P402	Store in a dry place.
P403	Store in a well-ventilated place.
P404	Store in a closed container.
P405	Store locked up.
P406	Store in corrosive resistant/… container with a resistant inner liner.
P407	Maintain air gap between stacks/pallets.
P410	Protect from sunlight.
P411	Store at temperatures not exceeding °C/°F.
P412	Store at temperatures not exceeding 50 °C/122 °F.
P413	Store bulk masses greater than kg/lbs at temperatures not exceeding °C/°F.
P420	Store away from other materials.
P422	Store contents under …
P402 + P404	Store in a dry place. Store in a closed container.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P410 + P403	Protect from sunlight. Store in a well-ventilated place.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P411 + P235	Store at temperatures not exceeding °C/°F. Keep cool.
P501	Dispose of contents/container to …

Identifier	Statement

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