



CLP mixture calculation tool 2021

Why?

Chemical products supplied to third parties must be classified and labelled in accordance with the CLP Regulation.

Even in-house mixtures (laboratory, reservoirs etc) require in some member-states to be CLP classified & labelled (occupational health legislation). The rules therefore also apply to downstream users.

Classifying and labelling mixtures is difficult and time-consuming. Therefore, we have developed a convenient and affordable tool in Excel.



The calculation tool

With the concentrations and hazard classification (H-phrases) of the raw materials, the tool creates a label with the H & P statements, pictograms, signal word and relevant substances. See a sample label below. The annexes show the input data.



Test mix



Fara

Brandfarlig vätska och ånga. Kan orsaka organskador. Kan vara dödligt vid förtäring om det kommer ner i luftvägarna. Skadligt vid förtäring eller hudkontakt. Irriterar huden.

Orsakar allvarlig ögonirritation. Giftigt för vattenlevande organismer med långtidseffekter. Innehåller B. Kan orsaka en allergisk reaktion.

Får inte utsättas för värme, heta ytor, gnistor, öppen låga eller andra antändningskällor.

Rökning förbjuden. Inandas inte gaser/dimma/ångor/sprej. Undvik utsläpp till miljön.

VID FÖRTÄRING: Kontakta genast GIFTINFORMATIONSCENTRALEN/ läkare. Framkalla INTE kräkning. Vid exponering eller misstanke om exponering: Kontakta GIFTINFORMATIONSCENTRALEN/ läkare.

Innehåller: B. C.

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With this tool the classification & labelling of mixtures or checking mixture classifications will only cost you a fraction of the time!



Cost & Users

Costs in SEK (excluding VAT):

- the described calculation model: **4 450 kr***
 - Update subscription: **750 kr/ year** (optional).
- *500 kr discount when attending our CLP mixture classification training course.

Updates

The tool is regularly updated following legislative changes and customer requirements. Updates within 1 year of purchase are free of charge.

Helpdesk & Training

We provide a free of charge helpdesk for questions about the tool. The tool does not require training, however basic knowledge of CLP calculation rules is recommended when using classification tools (see our training course: **CLP mixture classification**)

Users

Hospital & school laboratories, metal plating companies, chemical companies.

Tenviro

Tenviro AB is a consultancy & training bureau specialised in chemical legislation with a background within the REACH & CLP helpdesk.

For questions, the order form, or a Demo version, please contact Erwin Theelen via:

- **Contact information**

June 2021



Specifications CLP mixture calculation tool

- system** Excel workbook (MS Excel from 2010)
- language** The tool is in English, but all label information can be shown in any of the official languages of the 27 EU member-states.
- input** The tool requires for all substances in the mixture:
- the maximum concentration
 - the H-statements (codes) for health & environment
 - any applicable (CLP annex VI, REACH dossier, substance SDS):
 - M-factors or Specific Concentration Limits
 - LD/LC₅₀ or ATE values (if not known, the tool uses legal default values)
- Also, the flash- & boiling point and viscosity of the mixture can be given.
- output** The tool calculates for the mixture:
- the H-statements for health & environment and EUH208 & EUH210 (other H & EUH statements can be added manually), signal word & pictograms
 - the applicable P-statements with an indication of importance (the 6 most appropriate statements have to be selected by the user)
 - a draft label with recommendations for further editing & printing (in Word)
 - an indication regarding the need for poison centre notification (& UFI), SDS, tactile warning, child-resistant fastening and conclusions regarding CMR status & SEVESO III category, all based on only the H-statements.
- limitation**
- The tool works without a substance database
 - Health and environmental hazards can be calculated, for physical hazards such as flammability there are no calculation rules in CLP
 - 10 substances can be entered with 15 H-statements for health and/ or environmental hazards per substance
 - The label has a fixed size which can easily be further edited in Word
 - Tools are not a replacement of the legal CLP text.
- manual** The tool comes with a manual with an explanation of the tool and backgrounds regarding CLP calculation rules.

As an attachment you will find examples/ screen dumps of some parts of the calculation tool. There is also an informative [introductory film](#).



input

Input → required information & result overview

Enter mixture information			
Enter the name of the mixture	Test mix		
Is the pH of the mixture ≤ 2 or ≥ 11,5?	no	Check viscosity:	kin. visco ≤ 20.5 mm ² /s (40°C)
If known, enter both flashpoint	28	and boiling point:	67
Attention, not all cells are empty	The mixture is:	H371 H304 H302+H312 H315 H319 H411	H226 EUH208

Enter classification information for all substances

SUBSTANCE 1			
Name:	A		
max % in mixture (do not use % sign):	1,5		
Indicate any unknown Acute toxicity:			
H-codes (pick from the list)	h304		
Pick health (H3xx) & environmental (H4xx) hazard codes (related to the hazard classification of the substance) from the list. For some hazards the category is specified (H317, H334, H300, H310, H330) and for inhalation tox (H330-H332) even the phase related to the test info: (v)apour, (g)as, (d/m) dust/mist (if not sure, and no LC50 is known, choose (v)apour). Add any physical (H2xx) hazards or EUH statements under worksheet Labelinfo.	h314	10	give also H315 & H319 with their SCLs
	h315	2	
	h319	2	
	h410	10	
SCL/LD50/M (do not use % or ≥ signs etc.)			
Enter any SCL/LD50/M if included in CLP annex VI, the REACH dossier or SDS: - Specific Concentration Limits; for hazard classes with more SCLs, give the SCL for each category (like separate SCLs for H314, H315 and H319). - LD50s/ ATEs (only for H300-H302, H310-H312, H330-H332); for inhalation, use: - 4-hour data (divide 1-hour data by 2, or by 4 if dust/mist) - for Gas: ppmV (ml/m ³), convert mg/l data (ppmV = mg/l * 1000 * 24,45 * 1/MW) LD50s must fit the hazard category, if not sure, do not enter a LD50. - M-factors (only for H400 & H410); if a substance is both classified H400 & H410, with only 1 M-factor in CLP annex VI, use the factor for both			

SUBSTANCE 2			
Name:	B		
max % in mixture (do not use % sign):	9		
Indicate any unknown Acute toxicity:			
H-codes (pick from the list)	h304		
Pick health (H3xx) & environmental (H4xx) hazard codes (related to the hazard classification of the substance) from the list. For some hazards the category is specified (H317, H334, H300, H310, H330) and for inhalation tox (H330-H332) even the phase related to the test info: (v)apour, (g)as, (d/m) dust/mist (if not sure, and no LC50 is known, choose (v)apour). Add any physical (H2xx) hazards or EUH statements under worksheet Labelinfo.	h370		give also H315 & H319 with their SCLs
	h317(1/1B)	10	
	h311		
	h301		
SCL/LD50/M (do not use % or ≥ signs etc.)			
Enter any SCL/LD50/M if included in CLP annex VI, the REACH dossier or SDS: - Specific Concentration Limits; for hazard classes with more SCLs, give the SCL for each category (like separate SCLs for H314, H315 and H319). - LD50s/ ATEs (only for H300-H302, H310-H312, H330-H332); for inhalation, use: - 4-hour data (divide 1-hour data by 2, or by 4 if dust/mist) - for Gas: ppmV (ml/m ³), convert mg/l data (ppmV = mg/l * 1000 * 24,45 * 1/MW) LD50s must fit the hazard category, if not sure, do not enter a LD50. - M-factors (only for H400 & H410); if a substance is both classified H400 & H410, with only 1 M-factor in CLP annex VI, use the factor for both			

SUBSTANCE 3			
Name:	C		
max % in mixture (do not use % sign):	2,5		
Indicate any unknown Acute toxicity:			
H-codes (pick from the list)	h319		
Pick health (H3xx) & environmental (H4xx) hazard codes (related to the hazard classification of the substance) from the list. For some hazards the category is specified (H317, H334, H300, H310, H330) and for inhalation tox (H330-H332) even the phase related to the test info: (v)apour, (g)as, (d/m) dust/mist (if not sure, and no LC50 is known, choose (v)apour). Add any physical (H2xx) hazards or EUH statements under worksheet Labelinfo.	h370		give also H315 & H319 with their SCLs
	h315		
	h304		
	h310(2)		
	h412		



Fine-tuning

Input → adding physical hazards & EUH statements, selecting P-statements

Adjust Label information				Cells not empty: P-code selection, Address info.
Target group settings				
Choose language	en (English)	(all label information like signal word, H & P statements will we appear in this language)		
Consumer supply?	No	B2B or no supply is chosen (P-statement & EUH210 relevance)		
Calculated and added Hazard Statements (H-codes)				
Calculated results (H-statements) that will appear on the label (changing is only possible by adjusting input information)				
H226	Flammable liquid and vapour.			
H371	May cause damage to organs.			
H304	May be fatal if swallowed and enters airways.			
H302+H312	Harmful if swallowed or in contact with skin.			
H315	Causes skin irritation.			
H319	Causes serious eye irritation.			
H411	Toxic to aquatic life with long lasting effects.			
Add Physical hazards if required				
Pick H2xxx code	(based on test/ lab information or ingredients with such hazards; CLP has no calculation rules for mixture classification for physical hazards)			
<input type="text"/>				
Add EUH statements if required				
Pick EUH code	(based on the presence of certain substances or specific hazards; check for statements: EUH information)			
<input type="text"/>				
Select Precautionary statements for the label				
P-code	Precautionary statements (selected statements are marked green)	Importance	Remarks & tips	6 selected Select for label
Select max 6 (always <10) statements that are most relevant and appropriate for the type & use of the mixture (see importance)		Keep P330, P331, P310-P312 with 'IF', the combi is 1 phrase		
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.	HR		Yes
P260	Do not breathe dust/fume/gas/mist/vapours/spray.	HR(if)	Only if inhalation is likely. Delete non-relevant / parts.	Yes
P273	Avoid release to the environment.	HR		Yes
P321	Specific treatment (see ... on this label).	HR(if)	Use only if info is provided.	
P391	Collect spillage.	HR		
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...	HR	Replace ... with info. Delete non-relevant / parts.	Yes
P331	Do NOT induce vomiting.	HR	Keep with 'IF' phrase.	Yes
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor/...	HR	Replace ... with info. Delete non-relevant / parts.	Yes
P370+P378	In case of fire: Use... to extinguish.	HR(if)	Replace ... with info.	
P403+P235	Store in a well-ventilated place. Keep cool.	HR		
P240	Ground and bond container and receiving equipment.	R/O		
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.	R/O	Replace ... with info. Delete non-relevant / parts. Delete [] part if not appropriate.	
P242	Use non-sparking tools.	R/O		
P264	Wash ... thoroughly after handling.	R/O	Replace ... with info.	
P270	Do not eat, drink or smoke when using this product.	R/O		
P280	Wear protective gloves/protective clothing/eye protection/face protection.	R/O	Delete non-relevant / parts.	
P312	Call a POISON CENTRE/doctor/... if you feel unwell.	R/O	Replace ... with info. Delete non-relevant / parts.	
P301+P312	IF SWALLOWED: Call a POISON CENTRE/doctor/... if you feel unwell.	R/O	Replace ... with info. Delete non-relevant / parts.	
P330	Rinse mouth.	R/O	Keep with 'IF' phrase.	
P302+P352	IF ON SKIN: Wash with plenty of water/...	R/O	Replace ... with info. Delete non-relevant / parts.	
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].	R/O	Delete [] part if not appropriate.	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	R/O		
P332+P313	If skin irritation occurs: Get medical advice/attention.	R/O	Delete non-relevant / parts.	
P337+P313	If eye irritation persists: Get medical advice/attention.	R/O	Delete non-relevant / parts.	
P362+P364	Take off contaminated clothing and wash it before reuse.	R/O		
P405	Store locked up.	R/O		
P501	Dispose of contents/container to ...	R/O	Replace ... with info. Delete non-relevant / parts.	



Checking and adding supplemental label information

Relevant substances for including on the label	
Keep calculated substances:	B. C.
Or add substances manually:	
Special information for including on the label	
Select for label?	<p>Extra statement that may be applicable</p> <p>Restricted to professional users.</p> <p>x percent of the mixture consists of component(s) of unknown acute toxicity.</p> <p>Contains x percent of components with unknown hazards to the aquatic environment.</p>
	<p>Results and advice for this mixture</p> <p>Not needed for this mixture.</p> <p>The current input under Classification gives no unknown acute tox ≥ 1%</p> <p>Mandatory if true (if data lacking for H400-H412): CHECK</p>
Unique Formula Identifier (UFI)	
Is this mixture supplied to third parties (B2B or, B2C)? If so, enter Yes, otherwise enter No:	<p>Supply? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Conclusion For this mixture a UFI (and PCN) is required!</p>
Generate a UFI for this mixture via below link and enter the UFI here (don't forget to organise the actual PCN):	<p><input type="text"/> UFI required</p> <p>Use the UFI generator: https://ufi.echa.europa.eu/#/create</p>
Other legally required label information	
<p>For the supply of products other legislation may require additional label information.</p> <p>Like for Biocidal/ Plant Protection Products, Detergents (cleaning products), REACH authorised substances.</p> <p>Such supplemental label information if applicable can be entered here (text appears on label as entered):</p>	
Enter company info (in case of supply to 3 rd parties)	
Company name	Tenviro AB
Company address	Bruskogatan 11, 365 32 Lessebo, Sweden
Telephone number	+46(0)47810254
	Tenviro AB, Bruskogatan 11, 365 32 Lessebo, Sweden, tel. +46(0)47810254

output

Result CLP hazard label →

THIS TOOL IS INTELLECTUAL PROPERTY OF TENVIRO AB, ONLY TO BE USED BY CLIENTS OF TENVIRO. FURTHER DISTRIBUTION OR DISSEMINATION IS NOT ALLOWED. THIS TOOL HAS BEEN DEVELOPED WITH GREAT CARE, BUT ERRORS CANNOT BE RULED OUT. THIS TOOL SHOULD NOT BE USED AS AN ALTERNATIVE FOR THE LEGAL TEXT OF THE CLP REGULATION.



Clean label data & advice	
<p>Advice:</p> <p>Copy-paste the label to Word before printing and adjust to the correct size (check below).</p> <p>Correct following information:</p> <p>Replace ... with info.</p> <p>Delete non-relevant / parts.</p>	<p>Test mix</p> <div style="text-align: center;"> </div> <p>Danger</p> <p>Flammable liquid and vapour. May cause damage to organs. May be fatal if swallowed and enters airways. Harmful if swallowed or in contact with skin. Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects. Contains B. May produce an allergic reaction.</p> <p>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe the dust/fume/gas/mist/vapours/spray. Avoid release to the environment. IF SWALLOWED: Immediately call a POISON CENTER/doctor/... Do NOT induce vomiting. IF exposed or concerned: Call a POISON CENTER/doctor/...</p> <p>Contains: B. C.</p> <p>Tenviro AB, Bruskogatan 11, 365 32 Lessebo, Sweden, tel. +46(0)47810254</p>



Indication of classification consequences

Label & pictogram size information		
Pick packaging size > 3 ≤ 50 Litre	Minimum label & pictogram sizes to respect when editing & printing the label Label size: 74 x 105 mm (A7). Pictogram size as diamond: 23 x 23 mm, as square in Word: 33 x 33 mm	
Create a Word document a bit bigger than needed and copy-paste above label. At the upper left corner of the pasted info is a + (table), click this and go to Layout (next to Tabeldesign) and choose "Convert table to text". Edit/ fit text and picture sizes if needed (there are always 8 pictograms grouped together).		
Consequences of the classification		
General consequences for users CMR (H340, H350, H360)/ SVHC SEVESO III, annex I part 1 cat.	No CMR cat. 1 substances used, note that other ingredients might fulfil the REACH SVHC criteria such als PBTs and endocrine disruptors Indication: P5x, E2, Check always for exemptions (in case of P1) or specifications (in case of P3x & P5x) and for substances in part 2: https://eur-lex.europa.eu/eli/dir/2012/18	
Consequences if the product is supplied to third parties (B2B or B2C) PCN/ UFI Safety Data Sheet (only for B2B)	For this mixture a UFI (and PCN) is required! SDS required	
Extra consequences if the product is supplied to the general public (consumers/ B2C) Tactile warnings of danger (TW) Child-resistant fastenings (CRF)		Tactile warnings of danger (TW) on label/ packaging required when supplied to general public/ consumers (EN ISO standard 11683) Child-resistant fastenings (CRF) on packaging required when supplied to general public/ consumers (EN ISO standard 8317)

Label in other languages

Clean label data & advice	
Advice: Copy-paste the label to Word before printing and adjust to the correct size (check below).	Test mix 
Correct following information: Replace ... with info. Delete non-relevant / parts.	Fara Brännfarlig vätska och ånga. Kan orsaka organskador. Kan vara dödligt vid förtäring om det kommer ner i luftvägarna. Skadligt vid förtäring eller hudkontakt. Irriterar huden. Orsakar allvarlig ögonirritation. Giftigt för vattenlevande organismer med långtidseffekter. Innehåller B. Kan orsaka en allergisk reaktion. Får inte utsättas för värme, heta ytor, gnistor, öppen låga eller andra antändningskällor. Rökning förbjuden. Inandas inte damm/rök/gaser/dimma/ångor/sprej. Undvik utsläpp till miljön. VID FÖRTÄRING: Kontakta genast GIFTINFORMATIONSCENTRALEN/läkare/... Framkalla INTE kräkning. Vid exponering eller misstanke om exponering: Kontakta GIFTINFORMATIONSCENTRALEN/läkare/... Innehåller: B. C. Tenviro AB, Bruksgatan 11, 365 32 Lessebo, Sweden, tel. +46(0)47810254
Clean label data & advice	
Advice: Copy-paste the label to Word before printing and adjust to the correct size (check below).	Test mix 
Correct following information: Replace ... with info. Delete non-relevant / parts.	Gevaar Ontwambare vloeistof en damp. Kan schade aan organen veroorzaken. Kan dodelijk zijn als de stof bij inslikken in de luchtwegen terecht komt. Schadelijk bij inslikken en bij contact met de huid. Veroorzaakt huidirritatie. Veroorzaakt ernstige oogirritatie. Giftig voor in het water levende organismen, met langdurige gevolgen. Bevat B. Kan een allergische reactie veroorzaken. Verwijderd houden van warmte, hete oppervlakken, vonken, open vuur en andere ontstekingsbronnen. Niet roken. Stof/rook/gas/nevel/damp/spuitnevel niet inademen. Voorkom lozing in het milieu. NA INSLUKKEN: onmiddellijk een ANTIGIFCENTRUM/arts/... raadplegen. GEEN braken opwekken. NA (mogelijke) blootstelling: Een ANTIGIFCENTRUM/arts/... raadplegen. Bevat: B. C. Tenviro AB, Bruksgatan 11, 365 32 Lessebo, Sweden, tel. +46(0)47810254