

This Information Sheet provides guidance on the changes brought about by the introduction of the Classification, Labelling and Packaging Regulations (CLP) which come into full effect on 1<sup>st</sup> June 2015.

## **Background**

In the 1960s, the EU passed a Directive which set out a classification system for chemical substances (meaning chemical elements like titanium or oxygen, and compounds of these like titanium dioxide). This was called the Dangerous Substances Directive (DSD).

In time, the same approach was applied to chemicals made of more than one substance, which are known as 'preparations' or 'mixtures' (the two words mean the same thing). Most chemicals which are used today by consumers and industry are preparations/mixtures. The law which set out these classification requirements was called the Dangerous Preparations Directive (DPD).



These two Directives – DSD and DPD – were implemented in the UK by a law called the Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 – known as CHIP.

CHIP is well known by chemical suppliers, and chemical users who will be familiar with the orange and black hazard symbols which have appeared on chemical products for many years and the system of Risk Phrases 'R' and Safety Phrases 'S'.

## **Globally Harmonised System (GHS)**

All over the world there are different laws on how to identify the hazardous properties of chemicals (called 'classification') and how information about these hazards is then passed to users (through labels and Material Safety Data Sheets for workers).

This can be confusing because the same chemical can have different hazard descriptions in different countries. For example, a chemical could be labelled as 'toxic' in one country but not in another.

Given the expanding international market in chemical substances and mixtures, to help protect people and the environment, and to facilitate trade, the United Nations (UN) developed a 'Globally Harmonised System' (GHS) on classification and labelling. GHS is a single worldwide system for classifying and communicating the hazardous properties of industrial and consumer chemicals. It sits alongside the UN 'Transport of Dangerous Goods' system and aims to have, worldwide, the same:

- Classifying criteria for chemicals according to their health, environmental and physical hazards.
- Hazard communication requirements for labelling and Safety Data Sheets.

The UN GHS is not a formal treaty, but is a non-legally binding international agreement which countries must create local or national legislation to implement. Within Europe this has been addressed with the introduction of *The Classification, Labelling and Packaging (CLP) Regulations*.

The UN anticipates that once fully implemented, the GHS will:

- Enhance the protection of human health and the environment by providing a system for hazard communication that is comprehensible throughout the world.
- Provide a recognised framework for those countries without an existing system.
- Reduce the need for testing and evaluation of chemicals (agreeing/harmonising classification will help to reduce the need for animal testing).
- Facilitate trade in chemicals whose hazards have been properly assessed and identified on an international basis.

## Classification, Labelling and Packaging (CLP) Regulations



Within Europe these changes were addressed with the introduction of *The Classification, Labelling and Packaging (CLP) Regulations* which fully replaced CHIP and the Dangerous Substances Directive and Dangerous Preparations Directive from 1<sup>st</sup> June 2015.

The main changes brought about by CLP that chemical users will notice is that the orange and black symbols were replaced with red symbols and Risk and Safety Phrases were replaced with Hazard Statements and Precautionary Statements.



**Hazard Statement 'H'**: Replaced the old Risk Phrases and means a phrase assigned to a hazard class and category that describes the nature of the hazards of a hazardous substance or mixture, including, where appropriate, the degree of hazard.

**Precautionary Statement 'P'**: Replaced the Safety Phrase and means a phrase that describes recommended measure(s) to minimise or prevent adverse effects resulting from exposure to a hazardous substance or mixture due to its use or disposal.

A summary of the CLP symbols and definitions can be found in Appendix 1. A list of the Hazard and Precautionary Statements can be found in Appendix 2.

## Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH) Regulations







Material Safety Data Sheets (MSDS) that were formerly required by the revoked Chemicals Hazard Information & Packing Supply (CHIP) Regulations, and which required suppliers to classify substances and give users information based on a specified classification scheme now fall under the scope of the Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH) Regulations.

### Further Information








- [HSE Website](#).


## APPENDIX 1: COMPARISON OF (CLP) AND REVOKED (CHIP) INFORMATION<sup>1</sup>

### Physical Hazards









Hazard Classes and Categories	NEW CLP Label Elements			OLD CHIP Label Elements		
Explosives <ul style="list-style-type: none"> <li>○ Unstable explosives</li> <li>○ Explosives, divisions 1.1 to 1.3</li> </ul> Self-reactive substances, mixtures, types A, B Organic peroxides, types A,B		H200 H201, H202, H203 H240, H241 H240, H241	<b>Danger</b>		(R2, R3)	<b>Explosive</b>
Explosives, division 1.4		H204	<b>Warning</b>	No classification		
Flammable gases, category 1 Flammable aerosols, category 1 Flammable liquids, category 1		H220 H222 H224	<b>Warning / Danger</b>		(R12) (R12) R12	<b>Extremely Flammable</b>
Flammable liquids, category 2 Flammable solids, category 1 Flammable solids, <b>category 2</b>		H225 H228 <b>H228</b>			R11 (R11) (R11)	<b>Highly Flammable</b>
Flammable aerosols, category 2 Flammable liquids, category 3		H223 H226	<b>Warning</b>	No symbol	(R10) R10	<b>Flammable</b>
				No classification flashpoint 56–60°C		








<sup>1</sup> Simplified view of GHS. A direct comparison of GHS against previous EU Classification and Labelling is not possible

Hazard Classes and Categories	NEW CLP Label Elements		OLD CHIP Label Elements			
Pyrophoric liquids, category 1 Pyrophoric solids, category 1 Substances, mixtures which in contact with water emit flammable gases, categories 1, 2 and <b>category 3</b>		H250 H250 H260 H261 <u>H261</u>	<b>Warning / Danger</b>		R17 R17 (R15) (R15) (R15)	<b>Highly Flammable</b>
Self-reactive substances, mixtures, type B Self-reactive substances, mixtures, types C, D and <b>types E, F</b> Self-heating substances, mixtures, category 1 and <b>category 2</b>		H241 H242 <u>H242</u> H251 <u>H252</u>			R12 R12	<b>Highly Flammable</b>
Organic peroxides, type B Organic peroxides, types C, D Organic peroxides, <b>types E, F</b>		H241 H242 <u>H242</u>			R7 R7	<b>Oxidising</b>
Oxidising gases, category 1 Oxidising liquids, categories 1, 2 and <b>category 3</b> Oxidising solids, categories 1, 2 and <b>category 3</b>		H270 H271, H272 <u>H272</u> H271, H272 <u>H272</u>	<b>Danger / Warning</b>		R8 R8, R9 R8, R9	<b>Oxidising</b>
Gases under pressure <ul style="list-style-type: none"> <li>○ Compressed gases</li> <li>○ Liquefied gases</li> <li>○ Refrigerated liquefied gases</li> <li>○ Dissolved gases</li> </ul>		H280 H280 H281 H280	<b>Warning</b>	No classification		

Hazard Classes and Categories	NEW CLP Label Elements			OLD CHIP Label Elements	
Corrosive to metals, category 1		H290	<b>Warning</b>	No classification	




## Health Hazards

Hazard Classes and Categories	NEW CLP Label Elements			OLD CHIP Label Elements		
Acute toxicity, categories 1, 2 <ul style="list-style-type: none"> <li>○ Oral</li> <li>○ Dermal</li> <li>○ Inhalation</li> </ul>		H300 H310 H330	<b>Danger</b>		R28 R27 R26	<b>Very Toxic</b>
Acute toxicity, category 3 <ul style="list-style-type: none"> <li>○ Oral</li> <li>○ Dermal</li> <li>○ Inhalation</li> </ul>		H301 H311 H331			R25 R24 R23	<b>Toxic</b>
Germ cell mutagenicity, categories 1A, 1B Carcinogenicity, categories 1A, 1B Reproductive toxicity, categories 1A, 1B STOT* single exposure, category 1 STOT* repeated exposure, category 1		H340 H350 H360 H370 H372	<b>Danger</b>		R46 R45, R49 R60, R61 R39 R48	<b>Toxic</b>
Respiratory sensitisation, category 1 Aspiration hazard, category 1		H334 H304			R42 R65	<b>Harmful</b>
Germ cell mutagenicity, category 2 Carcinogenicity, category 2 Reproductive toxicity, category 2 STOT* single exposure, category 2 STOT* repeated exposure, category 2		H341 H351 H361 H371 H373	<b>Warning</b>		R68 R40 R62, R63 R68 R48	

Hazard Classes and Categories	NEW CLP Label Elements			OLD CHIP Label Elements		
Acute toxicity, category 4 <ul style="list-style-type: none"> <li>○ Oral</li> <li>○ Dermal</li> <li>○ Inhalation</li> </ul>		H302 H312 H332	Warning		R22 R21 R20	Harmful
Skin corrosion, categories 1A, 1B, 1C		H314		Danger		R34, R35
Serious eye damage, category 1		H318			R41	Irritant
Skin irritation, category 2 Eye irritation, category 2 Skin sensitisation, category 1 STOT* after single exposure, category 3 <ul style="list-style-type: none"> <li>○ Respiratory tract irritation</li> </ul>		H315 H319 H317 H335	Warning		R38 R36 R43 R37	Irritant
<ul style="list-style-type: none"> <li>○ Narcotic effects</li> </ul>		H336		No symbol	R67	

\* Specific Target Organ Toxicity

**Environmental Hazards**

Hazard Classes and Categories	NEW CLP Label Elements			OLD CHIP Label Elements		
Hazardous to the aquatic environment, acute, category 1 Hazardous to the aquatic environment, chronic, category 1		H400 H410	Warning		R50 R50/R53	Dangerous for the Environment
Hazardous to the aquatic environment, chronic, <b><u>category 2</u></b>		<u>H411</u>				



## APPENDIX 2: HAZARD AND PRECAUTIONARY STATEMENTS

### **H 200 - Series: Physical Hazards**

H200	Unstable explosive
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 material
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 gas
H270	May cause or intensify fire; oxidizer
H271	May cause fire or explosion; strong oxidizer
H272	May intensify fire; oxidizer
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 Series: Serious Health Hazards**

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
- H332 Harmful if inhaled
- H334 May cause allergy or asthma symptoms or breathing 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)*
- H350i May cause cancer by inhalation
- 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)*
- H360F May damage fertility
- H360D May damage the unborn child
- H360FD May damage fertility. May damage the unborn child
- H360Fd May damage fertility. Suspected of damaging the unborn child
- H360Df May damage the unborn child. Suspected of damaging fertility
- 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)*
- H361f Suspected of damaging fertility
- H361d Suspected of damaging the unborn child
- H361fd Suspected of damaging fertility. Suspected of damaging the unborn child
- H362 May cause harm to breast-fed children
- H370 Causes damage to organs *(state specific effect 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 *(state specific effect 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 or 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 – Series: Environmental Hazards**

- 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
- H412 Harmful to aquatic life with long lasting effects
- H413 May cause long lasting harmful effects to aquatic life

### **Supplemental Hazard Information (EUH-Statements)**

EUH 001	Explosive when dry
EUH 006	Explosive with or without contact with air
EUH 014	Reacts violently with water
EUH 018	In use may form flammable/explosive vapour-air mixture
EUH 019	May form explosive peroxides
EUH 044	Risk of explosion if heated under confinement
EUH 029	Contact with water liberates toxic gas
EUH 031	Contact with acids liberates toxic gas
EUH 032	Contact with acids liberates very toxic gas
EUH 066	Repeated exposure may cause skin dryness or cracking
EUH 070	Toxic by eye contact
EUH 071	Corrosive to the respiratory tract
EUH 059	Hazardous to the ozone layer
EUH 201/ 201A	Contains lead. Should not be used on surfaces liable to be chewed or sucked by children Warning! Contains lead
EUH 202	Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children
EUH 203	Contains chromium (VI). May produce an allergic reaction
EUH 204	Contains isocyanates. May produce an allergic reaction
EUH 205	Contains epoxy constituents. May produce an allergic reaction
EUH 206	Warning! Do not use together with other products. May release dangerous gases (chlorine)
EUH 207	Warning! Contains cadmium. Dangerous fumes are formed during use. See information supplied by the manufacturer. Comply with the safety instructions
EUH 208	Contains ( <i>name of sensitising substance</i> ). May produce an allergic reaction
EUH 209/ 209A	Can become highly flammable in use Can become flammable in use
EUH 210	Safety data sheet available on request
EUH 401	To avoid risks to human health and the environment, comply with instructions for use

### **P 100-Series: General**

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

### **P 200-Series: Prevention**

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/light/.../equipment
- P242 Use only non-sparking tools
- 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

**P 300-Series: Response**

- 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
- 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 vomiting
- P332 If skin irritation occurs:
- P333 If skin irritation or a 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 areas
- 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 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
- 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
- P301/330/331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- 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
- P303/361/353 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 at rest in a position comfortable for breathing
- P304 +P341 IF INHALED: If breathing is difficult, remove victim to fresh air and at rest in a position comfortable for breathing
- P305/351/338 IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

- P306 + P360 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 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 a rash occurs: Get medical advice/attention
- 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
- P370/380/375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion
- P371/380/375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion

#### **P 400-Series: Storage**

- 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 a 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 Do not expose to temperatures 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

#### **P 500-Series: Disposal**

- P501 Dispose of contents/container to ...