

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 1st 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 1st 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) INFORMATION¹

Physical Hazards









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








¹ 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 category 3 |  | H250 H250 H260 H261 <u>H261</u> | Warning / Danger |  | R17 R17 (R15) (R15) (R15) | Highly Flammable |
| Self-reactive substances, mixtures, type B Self-reactive substances, mixtures, types C, D and types E, F Self-heating substances, mixtures, category 1 and category 2 | | H241 H242 <u>H242</u> H251 <u>H252</u> | |  | R12 R12 | Highly Flammable |
| Organic peroxides, type B Organic peroxides, types C, D Organic peroxides, types E, F | | H241 H242 <u>H242</u> | |  | R7 R7 | Oxidising |
| Oxidising gases, category 1 Oxidising liquids, categories 1, 2 and category 3 Oxidising solids, categories 1, 2 and category 3 |  | H270 H271, H272 <u>H272</u> H271, H272 <u>H272</u> | Danger / Warning |  | R8 R8, R9 R8, R9 | Oxidising |
| Gases under pressure <ul style="list-style-type: none"> ○ Compressed gases ○ Liquefied gases ○ Refrigerated liquefied gases ○ Dissolved gases |  | H280 H280 H281 H280 | Warning | No classification | | |

| Hazard Classes and Categories | NEW CLP Label Elements | | | OLD CHIP Label Elements | |
|---------------------------------|---|------|----------------|-------------------------|--|
| Corrosive to metals, category 1 |  | H290 | Warning | 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"> ○ Oral ○ Dermal ○ Inhalation |  | H300 H310 H330 | Danger |  | R28 R27 R26 | Very Toxic |
| Acute toxicity, category 3 <ul style="list-style-type: none"> ○ Oral ○ Dermal ○ Inhalation | | H301 H311 H331 | |  | R25 R24 R23 | Toxic |
| 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 | Danger |  | R46 R45, R49 R60, R61 R39 R48 | Toxic |
| Respiratory sensitisation, category 1 Aspiration hazard, category 1 | | H334 H304 | |  | R42 R65 | Harmful |
| 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 | Warning |  | 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"> ○ Oral ○ Dermal ○ Inhalation |  | 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"> ○ Respiratory tract irritation |  | H315 H319 H317 H335 | Warning |  | R38 R36 R43 R37 | Irritant |
| <ul style="list-style-type: none"> ○ Narcotic effects | | 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, <u>category 2</u> | | <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 ...