

Guidance on national chemicals control

Enforcement of legislation on
chemicals placed on the market

GUIDANCE 4/18



The Swedish Chemicals Agency is supervisory authority under the Government. We work in Sweden, the EU, and internationally to develop legislation and other incentives to promote good health and an improved environment. We monitor compliance with applicable rules on chemical products, pesticides, and substances in articles and carry out inspections. We review and authorise pesticides before they can be used. Our environmental quality objective is A Non-toxic Environment.

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Preface

Chemicals contribute in many ways to improving our standard of living, but some of them are hazardous and can have serious adverse effects on human health and the environment. It is therefore necessary to use different means to protect human health and the environment from the adverse effects from exposure to hazardous chemicals.

This guidance is part of a series of guidance documents developed by the Swedish Chemicals Agency. The series forms a complement to the *UNEP Guidance on the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration (LIRA guidance)* by giving more detailed guidance in different areas. This guidance document gives further advice related to enforcement measures with regard to the control of chemicals placed on the market.

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Summary

The aim of the present document is to give guidance to countries (governments and authorities) in setting up an efficient system for the enforcement of legislation on chemicals placed on the market, covering substances as such or when used in mixtures or in articles. Placing chemicals on the market is an activity that takes place in the country, and legislation on placing chemicals on the market therefore needs to be controlled within the country. Therefore, this guidance focuses on market surveillance rather than control at the border, even though both are needed.

Enforcement is essential, and without enforcement any law will be ineffective. This calls naturally also for enforcement of legislation regarding the placement of chemicals on the market. To make it easier to achieve compliance with legislation, the legislation must be clear and have sanctions in place. General roles and responsibilities of the authorities versus industry in the management of chemicals have to be clearly defined in national law. When developing the legislation, an active dialogue and information exchange with trade and industry is key, and having a phase-in or transition period normally also facilitates compliance.

This guidance has a focus on inspections, which is an essential part of the entire enforcement system. Inspections of producers and importers of chemicals is a core activity in the enforcement of national chemicals legislation, and inspections of retailers of chemicals are also covered in the guidance.

The scope of the inspections is dependent on the scope of the legislation, and all enforcement activities need to be based on demands in the current legislation in the country. The more extensive the chemical legislation is, the greater the need for more extensive inspections. This might include more areas to inspect as well as more inspection objects.

This guidance focuses on the inspection of provisions on classification and labelling, including safety data sheets (SDS), as well as bans and restrictions because these are essential parts in a preventive chemicals legislation. If these areas are dealt with correctly by producers and importers, this will benefit all subsequent steps in the supply chain.

Inspections systems should be designed to ensure adequate powers and capacity for inspectors. The effectiveness of inspections depends on the capacity of inspectors to perform their duties, and the inspectors will need adequate training for the control of chemical substances and mixtures. To ensure legal certainty and common handling of cases, legal training within the field is usually needed.

In the legislation, the kinds of tools available to an enforcement authority need to be made clear. Inspectors should be allowed to enter premises, take samples and photos, ask for relevant information and documentation, and to secure any evidence that might be relevant. When detecting non-compliances, their rights to decide on sanctions and to report deficiencies should be clearly stated. Possibilities to use injunctions, sanction fees, withdraw products, decide on prohibitions, and file police reports on relevant offences have to be listed in the law.

The guidance contains practical advice on how to control classification, labelling, and SDS among producers and importers as well as retailers when relevant. Checklists and links to other guidance documents can be found as well.

Definitions and Acronyms

Chemical products are usually defined and understood as chemical **substances** and **mixtures** of chemical substances.

GHS uses the following definitions:

Substance means chemical elements and their compounds in their natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities derived from the process used, but excluding any solvent that may be separated without affecting the stability of the substance or changing its composition.

Mixture means a mixture or solution composed of two or more substances in which they do not react.

Many chemical products are incorporated in finished products, or **articles**, during the production process. Examples could be painted and lacquered furniture, polymers and metals in electric and electronic products, dyes in textiles, flame retardants and plasticizers in plastic products, etc. Articles may pose a risk due to their chemical contents. In some countries specific substances have been regulated in specific groups of articles, but in general they are to a large extent unregulated with regards to their chemical contents.

The following definition is used in the EU REACH regulation:

Article means an object that during production is given a special shape, surface, or design that determines its function to a greater degree than does its chemical composition.

In this guidance, the following definitions are used¹:

Placing on the market means supplying or making available, whether in return for payment or free of charge, to a third party. Import shall be deemed to be placing on the market.

Producer means any natural or legal person producing chemicals.

Importer means any natural or legal person responsible for import, i.e. the physical introduction into the territory of the country.

Retailer means any natural or legal person in the country who only stores and places on the market a chemical for third parties.

Downstream user means any natural or legal person who uses a substance, either on its own or in a mixture, in the course of his or her industrial or professional activities.

Transporter means any natural or legal person who facilitates the physical transfer of products, whether on land, sea, or by air. Loading and unloading, storage, and other handling as part of the transfer are also included.

¹ Similar definitions are used in the EU REACH regulation

Acronym	Explanation
CLP	EU Regulation on Classification and Labelling of Substances and Mixtures (No. 1272/2008)
ECHA	European Chemicals Agency
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GHS	Globally Harmonised System on Classification and Labelling
OECD	Organisation for Economic Co-operation and Development
REACH	EU Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (No. 1907/2006)
SDS	Safety data sheet
UNEP	United Nations Environment Programme (UN Environment)
UNITAR	United Nations Institute for Training and Research
US OSHA	United States Department of Labor Occupational Safety and Health Administration

1 Introduction and scope

This document aims to guide national enforcement authorities for chemicals control in building up a well-functioning enforcement of legislation on chemicals placed on the market, including requirements on classification and labelling of chemical substances and mixtures² and bans and restrictions of chemicals in various products, and to support these authorities in designing enforcement activities. The guidance may also be of help to understanding the role of enforcement when designing laws.

Chemicals form an important part of our daily life, but they may also pose risks to health and the environment depending on their intrinsic hazardous properties and how they are used. A legal structure to control chemical substances and mixtures can be created in different ways, but the most important starting point is to clearly define in law the responsibilities of trade and industry and of the authorities.

There are several benefits of having a legislation on chemicals placed on the market. It is a central driver for the protection of health and the environment, and having good legislation in place can also facilitate trade between countries.

Any country introducing new legal requirements in different areas will need to consider how these requirements shall be controlled. Provisions for enforcement should therefore be established in legislation and effectively implemented because a law is meaningless if it is not enforced. The goal with enforcement is to ensure compliance with legislation.

A prerequisite for enforcement is that chemical legislation is in place that places obligations and responsibilities on producers and importers of chemicals and defines their responsibilities when they make chemicals available in the country, i.e. when they place the chemicals on the national market. Recommendations on legal frameworks can be found in chapter 9 (Further literature).

The following core principles of the legal structure form the basis for the enforcement:

- Clear division of responsibilities shall be defined in the legislation
- Requirements should be fully understandable for trade and industry as well as for inspectors, and they should be fully enforceable
- The enforcement authority needs to be supported by empowering legislation giving clear responsibilities and powers to act
- Enforcement authorities shall have long-term financing secured

This guidance focuses on the enforcement of legislation regarding the production, import, and placing on the market of chemicals. Placing chemicals on the market is an activity that takes place in the country. Enforcement of legislation on placing chemicals on the market therefore needs to be made within the country. Therefore, this guidance focuses on market surveillance rather than control at the border, even though both are needed. Chapter 3 provides a reasoning on the differences between the two and how they can complement each other.

Further, this guidance has a focus on inspections, which is an essential part of the entire enforcement system, with a special emphasis on methods and practical guidance relating to inspections of

- national requirements on classification and labelling of chemical products

² In accordance with the Globally Harmonized System for Classification and Labelling, GHS

- bans or restrictions of chemical products and chemicals in articles

The guidance does **not** include enforcement of

- workplace obligations (e.g. control of limit values, chemical exposure)
- emissions to the environment caused by chemical use at production sites (e.g. release to air/water/land)
- legislation on waste
- requirements for accident prevention at production sites (safety distances, etc.)
- transport of dangerous goods
- chemicals regulated by special legislation such as medicines, cosmetics, and foods

The FAO Guidelines for pesticide enforcement provides valuable support and input with regards to enforcement of pesticides. Links to that document and other relevant links are provided in chapter 9 for further reading and assistance.

2 Why is enforcement necessary?

The idea with having legislation in place is of course that industry and others affected by the legislation shall comply with the legal requirements. When new legislation is being developed, there are a number of issues to consider in order to facilitate future compliance with the legislation. There is also a need for enforcement to ensure that those targeted by the legislation actually comply with the requirements. This is important for trustworthiness in the entire legal system.

2.1 Conditions that facilitate legal compliance

When a country issues legislation on chemicals control, the intention is of course that those targeted by the legislation should comply with the legislation as far as possible without direct intervention by the authorities. There are some factors that can facilitate this. To start with, the legislation should be as clear and easy to understand as possible. Spreading information about the legislation also enhances the possibilities of compliance.

Even when there is a strong culture of law-abiding and legal compliance, actions to achieve compliance might not succeed if the requirements are not clear and with a reasonable effort possible to obey by those who are targeted by the legislation. The duties of each affected company must be understandable so that both the regulated company and the government can readily identify what constitutes compliance. Clear and easily understandable information from authorities about the requirements can facilitate this.

It is best when the regulated companies not only understand what the requirements are and how to comply with them, but also the reasons behind the requirements. Knowing the reason for requirements can help develop both the capacity and the willingness to comply.

A clear process for the development of new legislation including possibilities for companies to engage in the process and relevant transition periods prior to entry into force makes it easier for companies to comply with the legislation.



Figure 1: General scheme presenting the legislative process

Requirements can also be phased in over a period of time, with some simpler or more critical rules becoming effective earlier than others. The more industry and government can engage in a dialogue when new requirements are being developed, the better compliance can be expected once the regulations enter into force.

Information and general guidance could be given from the government to help the regulated companies to understand and comply with the relevant regulations. Such guidance should be made by other staff than inspectors in order to minimise the risk for bias.

2.2 Enforcement is needed to ensure compliance

Even if those targeted by legal requirements should comply with the requirements by themselves, enforcement is needed to ensure that this happens. When there is no control of the compliance of legislation, there will most likely be a higher degree of non-compliance. Ensuring effective compliance with legislation is therefore key for achieving the goals intended by the regulator, such as a high level of protection for human health and the environment. Enforcement is a key element for achieving compliance, and knowledge on the existence of inspections and sanctions will be a driver towards compliance.

Enforcement is also essential for trustworthiness in a legal system. For industry and others with obligations under a law it is important to know that there is enforcement in place ensuring that their competitors also will follow the law and that there will be some form of punishment if they violate the law. It is also a way for the general public in a country to maintain trust that the legal system can actually protect their health and environment. In international trade it is also important that countries can guarantee their credibility towards other countries by making sure their products are in compliance with legal demands.

Enforcement of chemical legislation helps protect:

- consumers and workers against unsafe products and negative health effects,
- the environment from pollution and negative environmental effects, and
- businesses from unfair competition by those who ignore the rules.

3 Market surveillance and control at the border are complementary

In many countries the customs authority performs extensive control of goods passing its borders by checking individual shipments, which usually takes place at numerous entry points in a country. Control at the border has many merits and is the first point for ensuring that banned chemicals do not enter the country.

Market surveillance (or market control) is usually understood as authorities ensuring that products released to the country's market are in compliance with the legal demands, and they may also take actions towards companies that are found to be non-compliant. Inspections are also intended to ensure that producers and importers have the skills and processes required to meet their responsibilities.

Placing chemicals on the market is an activity that takes place in the country, and legislation on placing chemicals on the market therefore needs to be controlled within the country. For example, regulations stating that a substance or mixture only may be used for a specific purpose are not possible to control at the border. If classification and labelling is required within a country, control within the country is necessary. A chemical might not carry correct labelling according to a country's legislation and in the country's official language when passing the border. This is not a problem in itself. It is the importer who should provide the chemical with correct labelling according to the relevant legislation before placing it on the national market. Control of dissemination of correct information to downstream users cannot take place at the border and therefore must be subject to control within the country. Furthermore, products produced within the country can only be controlled within the country.

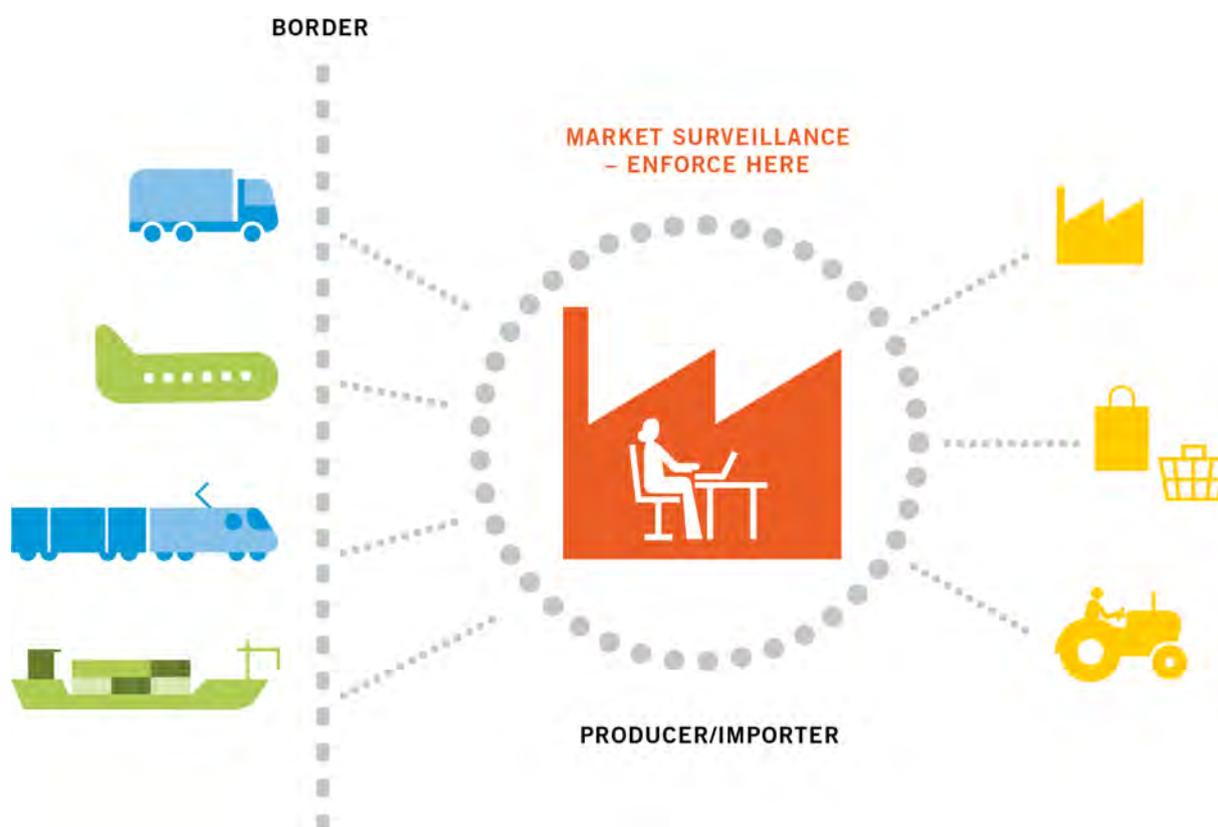


Figure 2: Market surveillance covers the producer or importer of chemicals, which differs from the control at the border usually controlling transport/delivery.

At the border, control of the transporter would be the most common. However, at the border the customs officers seldom or perhaps never meet with the responsible importing company. A single transport might be a mix of various importing companies, which could also be a problem when determining the responsible counterpart.

Control by the customs at the border and market surveillance by inspectors within the country are two systems that should complement and support each other. At the border there is a possibility to stop banned substances from entering the country as a first point of control. An efficient market surveillance will contribute to a more comprehensive control of restricted chemicals as well as other chemicals within the country and will cover both those that are produced in the country and those that are imported.

Chemicals control is a challenge because it requires specific competence for inspectors (also see section 6.1 on competence for the inspector), a competence that might not be possible to retain at all levels. This is another reason why a combination of the two is desired, where inspectors within the country can serve as a knowledge base, e.g. in cases where customs would want to withhold goods from entering the country but have a need for specialised input. Cooperation is essential when enforcement is divided between several enforcement authorities in order to form a well-functioning comprehensive enforcement system.

4 What should be inspected?

Inspections of producers and importers of chemicals is a core activity in the enforcement of national chemicals legislation. The scope of the inspections depends on the scope of the legislation, and all enforcement activities need to be based on demands in the current legislation. General roles and responsibilities of the authorities versus industry in the management of chemicals have to be clearly defined in national legislation. The responsibilities for producers/importers in placing chemicals on the market could consist of

- hazard classification,
- performing risk assessments and identifying and taking risk-reduction measures,
- passing on information on chemicals properties, hazards, risks, and handling procedures to downstream users,
- updating the information when required,
- ensuring that no restricted substances are produced or imported and placed on the market in the country,
- not selling chemicals subject to authorisation without such authorisation,
- packaging requirements, e.g., tactile warnings for visually impaired people,
- reporting to registers, and
- payment of fees.

Further background on legislation and risk reduction can be found in KemI Guidance 2/18 and 3/18^{3, 4}.

The purpose of chemicals legislation is to ensure safe chemicals management. Producers and importers will need to have the skills and competence that is required to be able to meet their responsibilities under such legislation. Inspections will be an important tool to ensure that producers and importers meet these requirements.

The more extensive the chemical legislation is, the greater the need for more extensive inspections. This might include more areas to inspect and more inspection objects as well.

This guidance will focus on classification and labelling, including SDS, as well as bans and restrictions because these are essential parts in a preventive chemicals legislation. If these areas are dealt with correctly by producers and importers, this will benefit all subsequent steps in the supply chain.

³ [Swedish Chemicals Agency Guidance on Risk reduction of chemicals, 2/18](#)

⁴ [Swedish Chemicals Agency Guidance on Legislation on chemicals to be placed on the market, 3/18](#)

4.1 Classification, labelling, and safety data sheets

A starting point in a well-functioning system for chemicals control is to ensure that information on the contents of the chemical substances and mixtures that are placed on the market is disseminated in the supply chain by those who place the substances and mixtures on the market. This enables all actors who receive the information to assess risks, make informed choices, and provide for safe handling. This could be done through legal obligations making the GHS mandatory⁵.

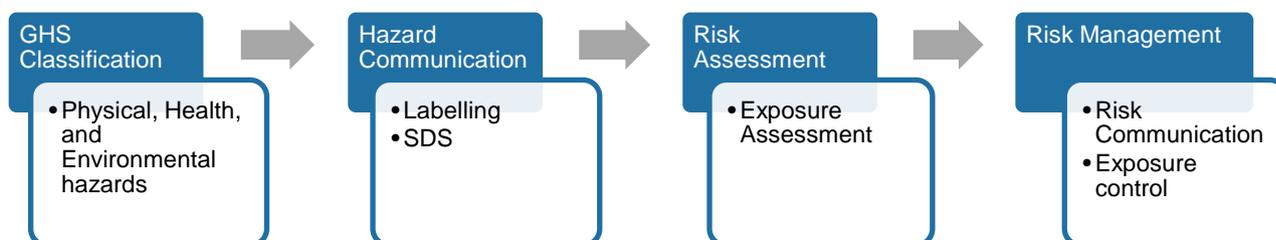


Figure 3: GHS correlates with safer chemical use

The GHS⁶ has been adopted by the United Nations as a recommended tool for the classification of chemical substances and mixtures based on their intrinsic properties and communication of this information in the supply chain by package labelling and SDS. GHS includes classification criteria for physical, health, and environmental hazards. GHS aims to ensure the compilation, assessment, and dissemination of information and to assist in building awareness and capacity for chemicals management in all areas where chemicals safety is a concern.



Figure 4: GHS Hazard Pictograms

This guidance document assumes some basic knowledge on the GHS as such. In-depth guidance can be found on the UN GHS webpage and in a guidance⁷ from UNITAR. Some further details are given in chapter 8.

If GHS has been implemented in national legislation, then primary suppliers, i.e. the producers and importers of chemical products, have the responsibility to ensure that the products they supply are classified and labelled correctly and that these products are followed by an SDS. The GHS labelling is based on the intrinsic hazardous properties of the product as identified using specific classification criteria. A general recommendation is to apply the classification criteria and hazard communication elements according to the GHS in national

⁵ [Swedish Chemicals Agency Guidance on Risk reduction of chemicals, 2/18](#)

⁶ http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html

⁷ Understanding the GHS – A companion Guide to the Purple Book.

http://cwm.unitar.org/publications/publications/cw/ghs/GHS_Companion_Guide_final_June2012_EN.pdf

legislation. The GHS classification criteria apply to both pure substances and to mixtures of substances. The GHS is designed to be consistent and transparent, and the GHS describes the criteria for classification and also provides a decision logic that visually describes the classification process for the hazard.

Classification and labelling requirements according to GHS are quite complex, and that is the reason why detailed requirements should be placed on the primary suppliers who should have the best knowledge on their products (composition, ingredient concentration, and intrinsic properties of substances included).

Countries could also consider the need for a list of harmonised classifications of a number of substances. Such a list could contain the most hazardous chemicals and/or the most commonly used substances if they are hazardous. If such classifications occur in a country, they are obligatory for all companies that are placing those chemicals on the market. For example, in the EU a list⁸ is published on harmonised classification of a number of substances. Other substances not on this list shall be classified by producers and importers of the substance or mixture according to the criteria in GHS.

4.2 Restrictions and bans

If a country has legislation in place restricting or banning the production, import, placing on the market, or use of certain chemicals, then this is also an essential area to inspect. The most common legislation in this area would be the implementation of multilateral agreements, especially the substances listed in, for example, the Stockholm Convention on Persistent Organic Pollutants, the Montreal Protocol, and the Minamata Convention on mercury.

A ban of the production, import and use of a chemical or a restriction of its use in certain applications can be introduced at all different levels of the life cycle. All production, import, and use of a chemical can, for example, be banned. In other cases, there might be a restriction for specific areas of use that cause high risk, e.g. in processes giving rise to pollution or in products that can pose risks in the use or waste stages. One example in this area would be that more and more countries are deciding to restrict the use of some hazardous substances in electric and electronic equipment (mainly some metals, flame retardants, and plasticizers).

Further links to advice on the implementation of conventions and risk reduction of other chemicals through bans and restrictions can be found in chapter 9.

4.3 Reporting requirements

If your country places legal obligations on producers, importers, or other actors to report to registries, inventories, or similar then compliance with these obligations must be controlled. This control is important to ensure that the inventory or register serves as a relevant source for the activities that it is meant for, such as risk management measures. An important function of a register could also be to serve as a basis for identifying companies to inspect. If so, it is essential to make sure that all actors really fulfil their reporting requirements. If an actor does not comply with reporting requirements, it should not mean that the actor avoids inspections. Therefore, for the purpose of controlling requirements to report to registers or similar, the basis for finding those to inspect must be broader than the register itself.

Use of general information, such as discussions with sector organisations, searches of suppliers on the Internet, and articles and advertisements in trade magazines can help in

⁸ <https://echa.europa.eu/regulations/clp/harmonised-classification-and-labelling>

identifying actors with potential reporting obligations. Controls of importers' compliance with reporting obligations can also be done via comparison of import statistics and reporting to the register. Controls of producers' compliance with reporting obligations can be done in connection with other forms of inspections for other requirements. It can also be done by following a product up the supply chain, for example, if a safety data sheet is controlled at the user level it can be followed up by checking if the supplier named in the safety data sheet has reporting obligations and complies with them. This might require cooperation between different enforcement authorities.

5 Who should be inspected?

A prerequisite for effective enforcement is that the legislation is clear on defining the responsibilities for different actors. It should thus be clear from the legislation which actors the enforcement should target⁹.

It is advisable to issue legislation placing obligations to classify, label, and provide SDS on the primary suppliers, i.e. the **producers and importers** of chemicals.⁹ Primary suppliers are the ones that should have the best knowledge of the contents and effects of the chemicals they place on the market, and if the classification and labelling is correct from the start this will follow the chemical to the downstream users and retailers, making it easier for them to fulfil their responsibility. Primary suppliers should also have the obligation to ensure that they are not placing products on the market that are banned or restricted in the country. Applying for any approvals needed, e.g. for pesticides or other substances of special concern, is furthermore a task for primary suppliers. Primary suppliers could also have other tasks such as ensuring that products are registered, following packaging requirements for specific products, etc.

It is not possible to cover actors in other countries through national legislation. Therefore the importers shall be responsible for the products they place on the national market. They could in turn obtain information from their suppliers in other countries.

Identifying companies in a country can be a challenge, especially importers because many times they are not included under other environmental requirements¹⁰.

Distributors and retailers should on their own behalf ensure that they have received the information and checked the labelling and packaging of products delivered to them, and in the case of pesticides that they have been approved according to the relevant legislation. They shall ensure that products they are about to distribute or sell do not contain banned or restricted substances.

The system should allow inspections along the supply chain, both at primary suppliers, distributors, and retailers. However, given that the legislation is structured in this way, it is reasonable to allocate inspection capacity mainly to the primary suppliers, targeting producers and importers, with less focus on the point of secondary suppliers or of retail sales. Focusing enforcement on primary suppliers is cost effective because it will prevent hazards and risks at an early stage, and restricted hazardous chemicals can be stopped from entering the market. The number of producers and importers are comparably few in relation to all retailers and users in a country. Product information (labels/SDS) should be produced by

⁹ [Swedish Chemicals Agency Guidance on Legislation on chemicals to be placed on the market, 3/18](#)

¹⁰ Swedish Chemicals Agency Guidance on *Access to information on primary suppliers and chemicals on the market* (to be published)

producers and importers and distributed to retailers and users. If the information regarding the hazards and the handling of the products is correct from the beginning, it will be more likely that correct information will follow the chemicals along when sold to downstream users.

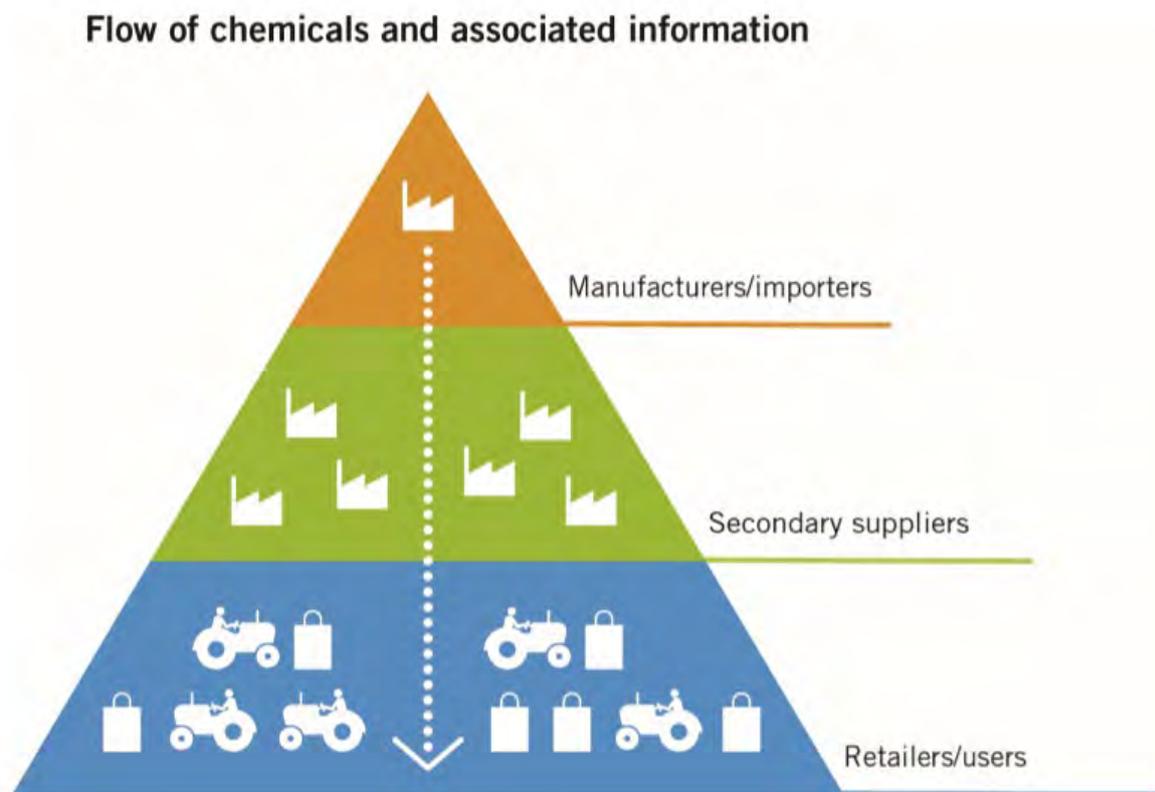


Figure 5: The enforcement of producers/importers involves fewer companies

6 Who should inspect?

To control legal compliance and take measures to achieve improvements is usually an obligation for enforcement authorities at central, regional, or local level. To be able to fulfil such obligations, the enforcement authority will need inspectors with knowledge of the law and usually also some technical knowledge, depending on the legislation.

The most efficient would be to have market surveillance covered by one central enforcement authority, e.g. within the field of health and environment, as one of this authority's main responsibilities, possibly cooperating with local/regional surveillance authorities, e.g. environmental inspectors. A central function can contribute to equitable and unified enforcement in the country, which can actually be more of a challenge for a decentralised and widely spread function. Chemicals control is a challenge because it requires specific competence for inspectors, a competence that might not be possible to ensure on all levels. Many countries may have assigned the core functions for legislation development and enforcement to the central government, although certain aspects may be managed at the provincial or local level. The same division of responsibility based on level of government

may be appropriate for the compliance and enforcement function, but there could be important differences.

While some degree of centralised planning and national-level oversight to address consistency, fairness, and integrity is warranted, some law enforcement activities are typically carried out at lower levels of government (e.g. environmental control on site). Controlling compliance by importers and producers with the obligations related to placing chemicals on the national market will, however, require enforcement at the national level or at least national coordination if regional authorities are responsible for enforcement.

A possible role for local or regional administrations would be to inspect for compliance and to respond to violations for retail sales, see section 8.4. Different mandates for enforcement between authorities at the central and/or regional and local level should be clearly stated in legislation to minimise the risks for gaps or overlaps in the enforcement duties. If different public authorities are responsible for inspection activities related to compliance of the same obligations, good coordination of these activities has to be ensured.

6.1 Inspectors' competence

Inspections systems should be designed to ensure adequate powers and capacity for inspectors. The effectiveness of inspections depends on the capacity of inspectors to perform their duties, and the inspectors will need adequate training for the control of chemical substances, mixtures, and, if covered by legal requirements, articles. Some countries have special training for health and safety inspectors and certify such inspectors. Chemical inspector training is, however, not common, and most countries with enforcement of, for example, legislation for classification and labelling use inspectors with health and safety training. This will in most cases be sufficient and effective provided that these inspectors have proper knowledge with regards to chemicals legislation. To ensure legal certainty and common handling of cases, new employees could be assigned a tutor/mentor who can support them in their daily tasks. Some legal training within the field is usually needed, and it will take up to a year before a new inspector can deal with all aspects of the work independently. Apart from the more formal academic training, areas such as product knowledge, legal understanding, and good judgement are all important.

Responsibility for appointing inspection officers can be assigned to the authority responsible for the administration of the chemicals legislation or to a central government authority in charge of appointing civil servants.

The Swedish experience

Chemical inspectors at the central level in Sweden all have different academic backgrounds, and they can be chemists, biologists, toxicologists, eco-toxicologists, public health officers, and similar. Common work field experiences prior to employment as inspectors range from work within local or regional authorities to positions within industries, for example, Health, Environment & Safety (HES) and social responsibility (CSR) or quality management.

6.2 Analysis and the use of laboratories

A component of enforcement and inspection activities is access to qualified laboratories. Such access is important when conducting inspections where tests might be needed for ensuring compliance. Analysis of chemicals is mainly needed to verify information from industry and to secure evidence of possible violations. The national authorities for enforcement should establish a system for the identification and access to suitable laboratories.

It is not necessary that authorities run laboratories with the capability to perform qualitative analyses for enforcement purposes by themselves. To run laboratories at authorities for chemicals management and/or inspections is burdensome in terms of equipment and staff and might lead to substantially increased costs. The national authorities should rather establish a system to facilitate access to suitable reference laboratories capable of performing the analysis of chemical contents for verification purposes. Many governments use certified laboratories from the private sector. The establishment of a joint laboratory infrastructure with countries sharing similar chemicals issues can also be a cost-effective and efficient way to build access to analytical capacity in a region.

6.3 Financing

The establishment of sustainable financing of the institutional capacity for the management of chemicals is one of the cornerstones for the sound management of chemicals and for ensuring enforcement activities. Information on sources for financing can be found in KemI Guidance 1/18¹¹.

6.4 Confidentiality

The authorities will obtain information from inspected companies that might need to be kept confidential. Companies that give information to the government and to authorities on their activities and chemicals must be certain that their need for confidentiality of commercially important details will be provided for in a satisfactory way. However, confidentiality should not apply for basic information or information about health/environmental effects. It is also not a reason for companies to withhold information to inspectors. Authorities need systems to handle data from companies, and this is in many cases regulated in general administrative laws.

7 Measures when observing violations

In order to get the desired effect of a law, it is most important that sanctions are applied in case of non-compliance. The role of the enforcement authority and its inspectors shall be clearly defined, and the rights and duties of inspectors can be outlined in a law and detailed in secondary regulations.

Measures taken when a case of non-compliance is detected should be based on the relevant legislation and should be proportionate and state the exact grounds on which it is based. Such measures shall be communicated without delay to the inspected company.

¹¹ [Swedish Chemicals Agency Guidance on Sustainable financing of institutional capacity for chemicals control, 1/18](#)

The inspectors shall have strict requirements on how decisions should be handled, and this can be described in the authority's work processes. Decisions are usually taken at the managerial level, with the inspector in charge co-signing.

Sanctions are not only effective for the entity in question, but can also give signals to other companies that they need to comply and also shows what might be the result of non-compliance. Social control, e.g. media reporting on violations, can also affect the willingness to comply.

7.1 Necessary tools

In the legislation, the kinds of tools available for an enforcement authority detecting non-compliances shall be clear. Legislation shall be clear on

- possibilities to use injunctions with a prospective fine,
- sanction fees,
- withdrawal of products, and
- decisions on prohibiting a specific product

Furthermore, whether the inspector shall file a police report (or similar, depending on the judicial context), and for what kinds of offences will need to be very clear. In section 8.3 and 8.4, some examples on appropriate measures have been included under the precondition that legislation is in place with regards to these measures.

Sanctions (or penalties) are generally defined by a list of administrative or criminal offences (non-compliance with the legal requirements). Sanctions could include monetary sanctions, limitations to or ending of the activities of the company, or for serious offences even imprisonment. Appeals to any decision should be possible.

The purpose of such tools and actions is of course to ensure compliance – for the future as well as punishing previous violations.

In establishing an inspection system, legislation should

- ensure comprehensive coverage of the sphere of companies that are to be inspected,
- provide the authority with mandates to appoint/employ inspectors,
- clarify the powers and obligations of inspectors, and
- ensure consistency with other legislation for civil servants/inspectors if applicable.

In their duties, inspectors should be allowed to

- enter and inspect premises or storage facilities, vehicles, and containers
- take samples for analysis and seize equipment,
- take photographs,
- ask for information and documentation and secure evidence,
- issue orders and/or decide on some sanctions in case of non-compliance, and
- report deficiencies to the police or prosecutors.

In addition, they should be able to request assistance from the police when needed. These rights should be clearly stated in any legislation. Example of legal text on rights and obligations of enforcement authorities and its inspectors as well as on penalties and sanction

fees can be found in KemI Guidance 3/18¹². Enforcement authorities shall carry out their duties independently, impartially, and without bias.

The Swedish experience

When (serious) violations are discovered, inspectors in Sweden have an obligation to report this to prosecutors (according to the Swedish Environmental Act). Such reports are decided by the manager and co-signed by the inspector in question. The prosecutor can then decide whether the violation will lead to a prosecution. Inspectors also have a possibility to propose a sanction fee, which should be decided by the manager in charge. The areas for sanction fees are defined in legislation.

8 Inspections – practical guidance

Advice expressed in this chapter requires a legislation as discussed so far in this guidance, placing demands on producers and importers to classify, label, and distribute information on hazardous properties for chemicals and to comply with bans and restrictions¹³.

8.1 Strategic planning and cooperation

To ensure that enforcement is effective and relevant, strategic planning and prioritisation will be needed. If the inspections will need to be carried out by more than one enforcing authority, it is important to be sure to as far as possible that information is exchanged on each other's activities and that site visits and other inspection work are co-ordinated.

No enforcement authority will have the resources to control all companies and all products. A strategic approach should be used to ensure efficient enforcement of the regulations and the use of available resources in the best way. The strategy should include all of the relevant inspection authorities.

Elements of an enforcement strategy include the following

1. Defining clear policy objectives and priorities and the assessment of the risks of non-compliance and prioritisation of the target groups
2. Creating the necessary organisation
3. Planning enforcement activities
4. Performing enforcement activities
5. Developing and implementing procedures for periodic progress monitoring and measurement
6. Developing and implementing procedures for review, evaluation, and update of the enforcement strategy based on the monitoring procedures
7. Reporting on enforcement

¹² [Swedish Chemicals Agency Guidance on Legislation on chemicals placed on the market, 3/18](#)

¹³ [Swedish Chemicals Agency Guidance on Risk reduction of chemicals, 2/18](#)



Figure 6: Strategic planning and evaluation

8.1.1 Prioritising areas and objects for enforcement – various strategies

Usually countries have limited resources in terms of staff and/or financing for chemicals control. Many countries have wide responsibilities placed on their inspectors – regardless of whether they have health, the environment, or labour as their major task. There therefore needs to be a prioritisation between possible enforcement activities. The following section elaborates on factors that should be taken into consideration when prioritising activities and selecting objects within an enforcement authority.

The main policy objectives are typically included in the regulations to be enforced. Enforcing authorities can take into account the following general principles:

- a) The regulations should be effectively enforced, but in ways that minimise the burden for the regulated companies and for the enforcing authority.
- b) The prioritisation of target groups for inspections should be based on a structured and documented approach. This gives transparency and makes it possible to evaluate and improve the methodology.

Target groups can, for example, be defined according to their role in regulations (such as producers of chemicals), other company roles, on types of products (such as paints), or on the size of the company. The relevant legal obligations and requirements should be identified.

Choose objects for enforcement depending on, for example:

- How widely spread is a chemical in society? Are there products that are produced or imported in large volumes? Is there knowledge if a particular product/product group is being used by the general public or by industrial users?
- Is there or will there be new legislation in a specific field? This could be a reason for information as well as enforcement activities.
- Specific legislation could be controlled, e.g. that pesticide products are approved or compliance with bans and restrictions.
- Location, i.e. all primary suppliers in a specific region/area
- The business roles the companies have, e.g. producers might have a higher priority than retailers

- Urgent objectives, e.g. evaluation of hints from other authorities or others

Identification of the companies that should be covered by enforcement can be a challenge, especially for countries with a lack of inventories, registration processes or similar. Guidance on how to identify primary suppliers will be given in a KemI Guidance¹⁴.

The effect of non-compliance should be assessed. The risk arising from non-compliant use of a chemical substance should be considered, and more severe hazardous properties and wide dispersive use means a higher risk for human health and/or the environment and makes it a priority from a risk perspective.

Previous experience is a good base for the assessment of compliance behaviour of target groups. Also, a model of aspects determining a company's compliance with regulations can be used.

Strategies for controlling chemicals that are banned/restricted should be developed. By observing authorities in other countries, for example, information affecting the domestic market might be found. It can be efficient for countries to cooperate on a bilateral and regional basis, both in terms of enforcement and in the development of legislation. Examples on relevant exchange could include what kinds of products generate the greatest risks.

In the EU, an electronic information exchange system is in operation and is publicly available and might help indicate where restricted chemicals might be detected. *Rapex - Rapid Alert System for non-food dangerous products* – alerts on all kinds of risks with products and not just chemical risks. The information is updated weekly and is accessed through the EU commission website¹⁵.

Serious accidents or incidents should be investigated without undue delay after these come to the notice of the relevant enforcement authorities, in line with any relevant accident or incident selection criteria they might apply. Any risks to, and impact on, human health and the environment shall be considered. Some countries have in their legislation measures such as a possibility to recall or withdraw products from the market, when products presenting a serious risk that require rapid intervention are identified during inspection.

Monitor performance

Monitoring is an important task in the life of an enforcement programme or project. This involves regular and systematic assessment based on participation, reflection, feedback, data collection, analysis of actual performance (using indicators), and regular reporting. Monitoring helps to understand where the programme is in relationship to planned results, to track progress (on the basis of intended results and agreed indicators), and to identify issues as the programme progresses.

Review performance

Review and evaluation is a critical management tool for achieving better results. An evaluation is an assessment of an activity, project, or programme focussing on expected and achieved accomplishments and examining the results chain, processes, and contextual factors of causality in order to understand the achievements or the lack thereof.

¹⁴ Swedish Chemicals Agency Guidance on *Access to information on primary suppliers and chemicals on the market* (to be published)

¹⁵ https://ec.europa.eu/consumers/consumers_safety/safety_products/rapex/alerts/

Communication on enforcement

Communication is a key element in the enforcement interaction with each company, but communication to a wider audience than the companies subject to an enforcement activity can be a useful tool to increase compliance. Communication can be used:

- As a tool for increasing compliance through increased knowledge of the requirements. A company must have a knowledge and understanding of the regulations and rules in order to comply.
- As a leverage for inspection activities. Informing sector associations and companies in general about selected future control activities, including what sectors and product groups that will be prioritised, can support pro-active actions among regulated companies to comply ahead of any inspections.
- After the enforcement as a tool to communicate that inspections have taken place. This increases deterrence (perceived risk of being controlled) for companies that were not inspected and gives legitimacy to the regulations (level playing field, etc.). It will also help customers prioritise among their requirements on suppliers.

8.1.2 Cooperation and support between authorities

Cooperation and coordination mainly serves as a means for effective and equal enforcement within a country. Coordination can take place through cooperation between municipalities and also with common projects. Seminars and conferences arranged by central authorities can also serve as support for regional and local authorities.

Experience from some countries indicates that through common projects the impact on the market is larger than usual. Such projects might ensure that several parts of a supply chain are covered. A central authority can function as the coordinator of a project, helping with such practicalities as checklists, training, and reporting. During the course of the project a “help desk” for inspectors could also be a function of the central authority. One positive effect of such an approach is that enforcement will be efficient and mainstreamed between all participating authorities.

In Annex 1 some examples of common checklists and guidance can be found, in this particular case regarding enforcement of pesticides. Also see the practical advice in sections 8.3 and 8.4.

8.2 General guidance on the inspection

An inspection includes preparations, performance in place, and follow-up measures. These steps will be the same for inspections of producers/importers and retailers. In Annex 1 a checklist for inspection visits has been included. Inspections can be proactive, based on priority strategies set by the authority. Inspections can naturally also be conducted to respond to a specific problem, such as non-compliance with labelling requirements for products found on the market reported by authorities, private companies, individuals, or civil society organisations.

Prepare by collecting knowledge

Collect knowledge on the company and its products e.g. by visiting their web page, using available registers, and previous experiences from inspections by the authority. For central or regional authorities, contact with the local authorities can also be valuable. If an announced inspection is planned, make an appointment for the inspection to ensure a meeting with the

appropriate responsible persons at the company. See more on announced versus unannounced inspections in section 8.3.

At the inspection

Inform the company why they are being inspected as well as who is doing the inspection and what their authority and tasks are. Ask them to tell more about their operations. Background information such as annual turnover, number of products, and suppliers can contribute important information. This information is mainly important for getting the broader picture of the company for the inspection in question and is not necessary to collect and use for other purposes.

After the initial discussions, the focus should be on the company's product portfolio (see section 8.3 and 8.4 for details on what to control). Inspectors should ask for some time on their own to examine the product information and to discuss appropriate measures when the company is not complying with legal demands.

A good way to secure as much information as possible is to have two inspectors present, one taking notes and the other carrying out the inspection. Having two inspectors will also ensure witnesses in case of disputes with the company. This will also minimise the risk for an inspector to be influenced by the company.

Summarise the observations

It is important to explain to the company not only what has been observed to be legally compliant, but also any violations observed and also what sanctions this may lead to. This is preferably done both orally and in a written protocol that is handed over to the company. Having a responsible person from the company present when this is done will normally lead to better correction. A common way would be to give the company a certain time after the inspection to prove they have made the necessary corrections, which could be checked at a follow-up visit or by requesting a written submission from the company to prove their corrections.

Back at the office

The findings of the inspections shall be written down in reports containing the information needed to ensure it is clear to the company as well as to the enforcement authorities what the findings are from the inspection. Such reports could be exchanged as necessary between relevant enforcing authorities and kept available for follow up and additional inspections.

Depending on the observations, further actions might be needed. This could include writing decisions, police/prosecutor reports, or similar. A note should be taken of when the company has agreed to make a correction, and it should be ensured that the requested proof for this arrives in due time, or a follow-up visit can be arranged.

In the following sections, recommended measures for various violations are described.

8.3 Inspections of producers and importers

As mentioned in chapter 4, the main responsibility for classification, labelling, and communication through SDS should lie on the primary suppliers, i.e. producers and importers, given that the GHS has been implemented in the country. A short background description on the GHS and its building blocks is found in section 4.1.

Producers and importers should also comply with legislation on bans and restrictions if there is such legislation in place.

Routines and competences of the producer and importer may also be systematically controlled. This usually means that a discussion should take place with someone well acquainted with the operations. Here, open questions should be asked so that the person interviewed will have the opportunity to describe the routines in the best way possible. Examples of questions can be found in annex 1.

Whether an inspection should be announced in advance or not can be discussed, and there are advantages and disadvantages with both approaches. An announced inspection will most likely lead to possibilities to meet with the most competent persons, which is a prerequisite to perform a more systematic inspection. Unannounced inspections, on the other hand, minimises the risk for short-term corrections that are only temporary. To ensure that the correct level of expertise will be available at the time of the inspection of the producer or importer, it is generally preferred to conduct the inspections of producers and importers with advance notification.

8.3.1 Classification

Classification is the starting point for hazard communication. The company identifies the hazard(s) of a substance or mixture by assigning a hazard class using defined criteria based on data from testing. The hazard class, identifying the nature of the hazard, may be further delineated into hazard categories that indicate the degree or severity of the hazard or the strength of the evidence in the evaluated data. When test data fore.g. toxicity is available, it is often published in public data bases. Please see chapter 9 for some links to such valuable information.

Controlling that a classification has been made correctly requires in-depth knowledge of the GHS system, especially for complex products containing substances with several different classifications. A general rule is to check the SDS (see section 8.3.2) and compare the stated hazard properties with the limit values in the GHS. It is quite common to find that different companies have classified the same substance in different ways. This can happen when they have access to various data. In Sweden and many other European countries, a common way to handle this is to demand that the company ensures that they have access to all relevant data. The data showing the most severe hazard should be reflected in the classification. More in-depth knowledge on classifying substances as well as mixtures can be found in the UNITAR guidance to the GHS¹⁶.

Control the following

- The information in sections 2 and 3 of the Safety Data Sheet (SDS) should be used to control that the producer or importer have classified the substance/mixture correctly.
- The stated classification should be compared with publicly available information regarding hazardous properties. See chapter 9 with relevant web links.

Measures in case of violation

To ensure that the producer or importer will correct the deficiency, an injunction can be used and can be an option written into the legislation. Measures to ensure correct classification are closely linked to the quality of and compliance with the SDS.

¹⁶ <http://www.unitar.org/cwm/ghs>

8.3.2 Labelling

The labelling is based on a certain hazard classification, see section 8.3.1. In the GHS system there is a standardised way for expressing these hazards, and there are criteria for both pure substances and for mixtures of substances.

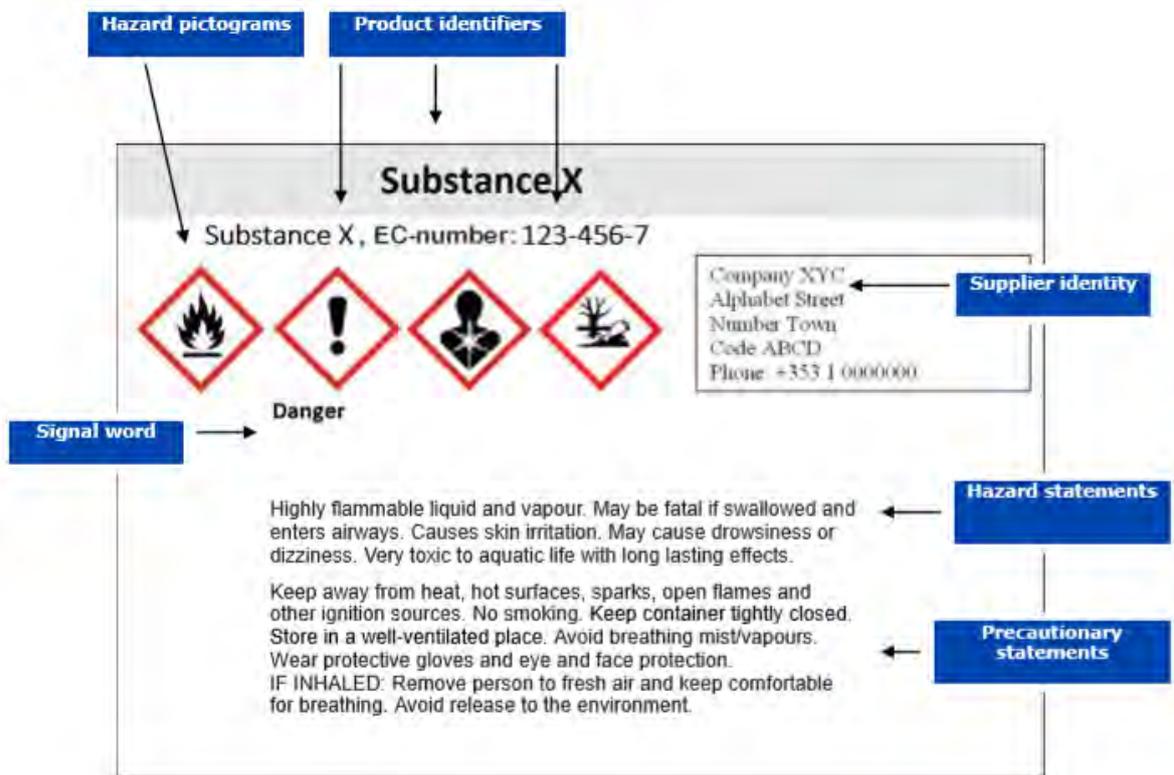


Figure 7: Example of a label according to GHS (Source: ECHA guidance on CLP labelling. CLP is the implementation of GHS in the EU)

Control the following

Note that labelling is a **requirement for products classified as hazardous** using GHS.

- Is the label consistent with the information contained in the SDS?
- Control the correlation with SDS section 2
- Is the labelling written in the official language(s) used in the country?
- Does the label fulfil the formal requirements, i.e. presence of pictograms, signal words, hazard and safety statements, name of producer, weight/volume etc.?
- Is the label easy to read and separated from other text?
- Are all the label elements located together on the label?

Measures when observing violations

Depending on the national legislation, different measures may be taken. Products that lack a label or have, for example, labels in a language that is not an official language of the country should be corrected. To ensure correction, an injunction is a normal measure, provided that this is a possibility according to the legislation. The company would then need to show that they have made corrections by, for example, sending a sample of the new label to the authority.

If the deficiencies are severe, e.g. the product contains very hazardous or restricted/banned substances as well as lacking labelling information, harder measures such as a prohibition to sell the product may be needed until the company has made corrections. Fines could be another alternative.

8.3.3 Safety Data Sheets

Controlling SDS involves both systematic approaches and random checks of the quality. The goal with a more systematic approach is to ensure that the primary supplier is competent and works systematically to ensure that their hazardous products are followed by a correct SDS when they sell these products. If they work systematically with their chemicals control, random control of quality should prove that the SDS are correct.

The intention of the SDS is to give professional users comprehensive information on how health and environment can be protected. The SDS is also a tool for the employer when they perform a risk assessment at the workplace. It is also important to recognise its role as an information carrier throughout the supply chain. As specified in GHS, SDS **shall be distributed free of charge** (on paper or electronically) for **hazardous products** or for **products containing hazardous substances over limits specified in GHS**.

Table 1: SDS format according to GHS

The GHS-compliant format for SDS have the following 16 sections			
1	Identification of the substance/mixture and of the company/undertaking	9	Physical and chemical properties
2	Hazard identification	10	Stability and reactivity
3	Composition/Information of ingredients	11	Toxicological information
4	First aid measures	12	Ecological information
5	Fire-fighting measures	13	Disposal considerations
6	Accidental release measures	14	Transport information
7	Handling and storage	15	Regulatory information
8	Exposure controls/personal protection	16	Other information

Control the following (for even more details, see check list in Annex 2)

- Is the SDS in an official language of the country?
- Is the SDS in the correct (16 headings) format? Is it easy to read and understand?
- Is the SDS distributed correctly to clients of the company?

1. Identification of the substance/mixture and of the company/undertaking

- Can the product be identified?
- Is there an intended use described?
- Name, address, and phone number to the company?

- Emergency phone?

2. Hazard identification

- Classification of the chemical product (substance or mixture)?
- What are the labelling elements?
- Are there other hazards to consider?

Example of a correct presentation:

Classification

Causes skin irritation, category 2; H315

Causes serious eye irritation, category 2; H319,

Harmful for aquatic life with long lasting effects, category chronic 3; H412

Labelling elements

Warning. Causes skin irritation. Causes serious eye irritation. Harmful for aquatic life with long lasting effects.

3. Composition/information of ingredients

- The substance name(s), CAS number(s), concentration or concentration intervals, and classification of each substance in a mixture should be listed

4. First aid measures

- Are the measures in accordance with the product's hazards?
- Are instructions for first aid measures divided into exposure routes?
- Can one see what medical treatment might be needed?
- Is it clear what symptoms or effects exposure might lead to?
- Is it clear how the workplace should be equipped?

Example of a presentation including relevant exposure routes:

General advice

Consult a physician. Show this SDS to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

5. Fire-fighting measures

- Are extinguishing media that *should* and/or *should not* be used listed?
- Are there any exposure hazards that may arise from fire?
- Are there any special safety requirements for fire fighters?

6. Accidental release measures

- Personal protection, e.g. respiratory protection, prevention of skin and eye contact
- Environmental precautions if needed
- Methods of cleaning up, e.g. absorbent material

7. Handling and storage

- Information here should assist the employer in choosing the appropriate equipment and procedures for handling and storage
- Is there advice on technical measures needed for handling?
- Can specified conditions for safe storage be found?

8. Exposure controls/personal protection

- Exposure limit values and parameters that need to be controlled during the use
- Are there specific national exposure limit values in the country?
- How should exposure be controlled? Occupational/Environmental
- Personal protective equipment (PPE) for respiration/hand/eye/skin exposure

9. Physical and chemical properties

- General information, e.g. appearance, odour
- Important health, safety, and environmental properties, e.g. pH, boiling point, viscosity, density, solubility, flashpoint

10. Stability and reactivity

- Conditions to avoid, e.g. light, temperature, pressure
- Other materials to avoid, e.g. water, air, acids/bases, oxidising agents
- Hazardous decomposition products

11. Toxicological information

- All properties making the product hazardous to human health
- Experience from injuries to human health and from scientific research
- Short-term, repeated, and long-term exposure
- Known symptoms

12. Ecological information

- Shall contain information about environmental hazards
- Examples of relevant information include toxicity (acute and long-term), test methods/tested organism(s), persistency and degradability, bioaccumulation, mobility in soil

13. Disposal considerations

- Are the appropriate methods of disposal specified for both the substance or mixture and any contaminated packaging, e.g. recycling?
- Any relevant provisions relating to waste shall be referenced

14. Transport information

- Transport classification for sea/road/rail/air
- This might include UN number, class, proper shipping name, packing group, marine pollutant

15. Regulatory information

- Section 15 gives information on the safety, health, and environmental legislation specific for the chemical product, which is not already indicated elsewhere in the SDS
- The relevant legislation may include any national and/or regional regulatory information on the chemical, as well as other legislation, such as occupational legislation, pesticides, restrictions/bans, etc.

16. Other information

- Relevant information that has not been included in the previous sections is provided in section 16. This might include changes from the previous SDS versions, a legend to any abbreviations and acronyms used, key literature references and sources for data, relevant risk phrases, hazard statements, safety phrases and/or precautionary statements (number and full text) as well as advice on training for those handling the chemical
- Many SDS will include a disclaimer or notice to the reader. Such statements do not release the legal obligations of the supplier to provide accurate and useful information

Measures when observing violations

It is not too uncommon to find SDS that are not written in the official language of the country. It is however important, especially for recipients, that the information is not only accurate but also understandable in a language they are used to. If inspectors encounter SDS that are in other languages, **an injunction to ensure correction** would be the most appropriate action to take under the precondition that legislation in the country includes such demands. Injunctions are also the most appropriate tools to ensure that SDS are actually produced and distributed to clients of the primary supplier.

Summary of the recommended legal structure for SDS and overview for compliance

- The primary supplier should be responsible for the information being correct in the SDS
- SDS should not be authorised or approved by any authority
- SDS are intended for professional users
- 16 mandatory headings
- The information in SDS shall be
 - o easy to read and understand
 - o relevant, reliable, and consistent
 - o written in an official language of the country

8.3.4 Banned or restricted products

Bans and restrictions are tools to protect human health and the environment from unacceptable risks posed by chemicals. Bans and restrictions may limit the production, import, placing on the market, or use of a substance. A restriction can apply to a substance as such, in a mixture, or in an article.

Primary suppliers, including both producers and importers, should be well acquainted with legislation restricting chemicals in the country. The Stockholm Convention and the Minamata Convention restrict the use of persistent organic substances and mercury, respectively, as such and in products. When implemented in a country's legislation, these conventions are also a part of legislation for restrictions and/or bans. Please also see section 4.2.

Control the following

- Banned substances – as such, in mixtures, or in articles – to ensure that they are not sold and distributed further
- Substances with specific use restrictions – to ensure that the substances are not used in violation with such restrictions (e.g. mercury in certain measuring devices)
- In certain cases a company may hold a dispensation to exempt them from the restriction, and this shall be controlled as well

Measures when observing violations

Depending on the legislation in the country, various measures can be taken. The important thing is to ensure that no substances, mixtures, or articles that are banned or restricted can reach the market. This can be done by confiscating products or by placing a prohibition in connection with a fine, which is an efficient way to stop any sale. Especially when products can cause acute damage and the risk for this is high, confiscation might be the most appropriate action. Follow up inspections are usually needed as a measure as well.

8.3.5 Packaging and Storage

Storage of hazardous chemicals should prevent risks for health and the environment. How to solve this might not be described in a legal text, but might be up to the company to decide. Recommendations and advice may be provided at an inspection, but these are naturally not imperative in the same way as legal demands.

Hazardous chemicals shall be stored separate from food and in places hard to reach for unauthorised persons, and the packages for chemicals should not resemble those intended for

food. Storage descriptions should be given in the SDS. Many countries have legislations for warehouses and the way chemicals shall be stored to minimise the risk for accidents, especially for explosives, etc.

The packages of hazardous chemicals should be safe, they should not leak during the product's use, and they should definitely not react with the chemical contents. If the package has a closure that makes it possible to reuse, the opening/closing device should have a lifetime as long as the package itself.

Control the following

- Is the storage of hazardous chemicals done in an acceptable way to prevent leakage?
- Are the packages safe and durable for normal use?
- Do packages resemble those for food?

8.3.6 Pesticides

Pesticides are any substances or mixtures of substances intended for preventing, destroying, or controlling any pest, including vectors of human or animal disease and unwanted species of plants or animals causing harm during or otherwise interfering with the production, processing, storage, transport, or marketing of food, agricultural commodities, wood and wood products, or animal feedstuffs or substances that might be administered to animals for the control of insects, arachnids, or other pests in or on their bodies. The term includes substances intended for use as a plant growth regulator, defoliant, desiccant or agent for thinning fruit or preventing the premature fall of fruit, and substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport. National legislation may define pesticide more or less broadly.¹⁷

Many countries have legislation regarding pesticides requiring registration for approval of active substances in the product and also often approval of the product as such. If so, the presumption would be that all pesticides in the country should need such an approval before they are sold. Producers applying for an approval of a product need to prove that the product does not lead to unacceptable risks for human health or the environment.

Countries with approval systems for pesticides would most likely benefit (in terms of enforcement and compliance) from making the approved products known to the general public and to inspectors at different levels. This could be made through, for example, a website. Another way of distributing information on the approval of a product would be to attach a code to approved products, which is a common measure in some regions.

Control the following

- Is the product approved according to the legal requirements? Does the product have a registration number (when applicable)?
- Is the labelling correct according to GHS and any described requirements for use?

Measures when observing violations

The main task when controlling pesticides is to prevent non-compliant products from reaching farmers and other users. This means ensuring that the products sold are approved, labelled,

¹⁷ This definition is retrieved from the FAO "Guidelines on compliance and enforcement of a pesticide regulatory framework".

and packaged according to the law so that the risks with using the products are minimised. If encountering products that have not been approved at the importer or producer, it is important to ensure that they do not sell or distribute the products further until they have received an approval in accordance with the country's legislation.

Please also see the section 4.1 on GHS labelling and the FAO Guidelines on compliance and enforcement of the pesticide regulatory framework (link in chapter 9).

8.4 Inspections at retailers

Inspecting a retailer selling chemical products will focus on a more limited set of rules and will differ somewhat from inspecting products at the primary supplier level. Most common is that the inspection at a retailer focuses on the products as such, for example, storage, labelling, and, when applicable, packaging requirements. Routines and competences at the retailer might also be systematically controlled.

Whether an inspection should be announced in advance or not can be discussed for retailers as for importers and producers as discussed in section 8.3. There are advantages and disadvantages with both approaches. An announced inspection will most likely lead to possibilities to meet with the most competent persons, which is a prerequisite to perform a more systematic inspection. If one plans to check several stores within a short time period, a good way of announcing this is to send a common letter explaining the background to the inspections and what the inspection will entail. Unannounced inspections, on the other hand, minimise the risk for short-term corrections made only temporarily.

When controlling products at a retailer, it can be convenient to initially scan the store and quickly control a number of products. How many varies and depends on a number of factors such as number of products in the store, the time available for the inspection, how complex the assessment is estimated to be, etc. Products that are not in compliance should be controlled more thoroughly.

A more systematic control would mean also inspecting the routines at the store and what kind of competence they have to fulfil legal requirements in the chemicals area. This usually means that a discussion should take place with someone well acquainted with the operations, e.g. purchase routines and product placement in the store. Here open questions should be asked so that the person interviewed will have the opportunity to describe the routines in the best way possible. Examples of questions to ask can be found in annex 1.

8.4.1 Labelling

Because many products sold to the general public may contain hazardous substances, users will need information to be able to protect themselves and their surroundings. It is essential to ensure that the products found in stores for sale to the general public are labelled correctly.

Classification and labelling requirements according to GHS are quite complex. As mentioned in chapter 4, it is advisable already when designing a national legislation to allocate the main responsibility for classification and labelling to the primary suppliers of chemicals, i.e. the producers and importers. They are in a better position to be accountable for the classification than the retailer, who should be able to rely on information provided from the primary supplier.

Even if the obligations for retailers are less, inspecting in stores is an action that can lead to finding products that are not labelled correctly, and the primary suppliers of those products

can then be identified with the purpose of carrying out inspections of them to ensure that corrections are made. Also see figure 7 in section 8.3.2 for an example.

Control the following

Note that labelling is a requirement for products classified as hazardous using GHS when this is implemented in the law in the country.

- Is the labelling in the official language(s) used in the country?
- Does the label fulfil the formal requirements, i.e. the presence of pictograms, signal words, hazard and safety statements, name of the producer, weight/volume, etc.?
- Is the label easy to read and separated from other text?
- Are all the label elements located together on the label?
- Is there any suspicion that the label is wrong?

Measures when observing violations

When a product lacks labelling in an official language of the country, this might pose a risk for the user. One relevant measure in such a case would be to ensure the product is not being sold, preferably by voluntary removal by the store owner. It is also important to ensure that the store contacts their supplier and asks for measures to be taken higher up in the supply chain, e.g. by attaching a new label on the product.

If the shortcomings are serious and pose great risks (e.g. lack of pictograms for hazardous products) and if the store owner does not intend to stop the sale, appropriate measures available in the country's laws should be used to ensure that the product is prevented from being sold, e.g. by imposing a prohibition on the sale (until appropriate measures have been taken).

8.4.2 Banned or restricted products

Bans and restrictions are tools to protect human health and the environment from unacceptable risks posed by chemicals. Bans and restrictions may limit the production, import, placing on the market, or use of a substance. A restriction can apply to a substance as such, in a mixture, or in an article.

The store should know when a product contains substances that are banned or restricted in the country. In some cases, regulations on who can buy a product are in place. If that is the case, the store should be able to prove how this is ensured, e.g. by an inventory of whom they have sold the product to.

Control the following

- Banned substances as such, in mixtures, or in articles – to ensure that the substance, mixture, or article is not sold or distributed further
- Substances with specific use restrictions – to ensure that the substance is not used in violation with such restrictions (e.g. mercury in certain measuring devices)
- For products restricted to certain users, it is important to ensure that the store keeps track of its customers and only sells the product in compliance with the legal provisions.

Measures when observing violations

Depending on the legislation in the country, various measures can be taken. The important thing is to ensure that no substances, mixtures, or articles that are banned or restricted will be sold. This can be done by confiscating products or by placing a prohibition in connection with a fine, which is an efficient way to stop any sale. Especially when products can cause acute damage and the risk for this is high, confiscation might be the most appropriate action. It might be necessary to collect such products from a store shelf, and follow-up inspections are usually needed as a measure as well.

8.4.3 Packaging and Storage

Storage of hazardous chemicals should prevent risks to health and the environment. How to solve this might not be described in a legal text, but could be up to the store owner to decide. Recommendations and advice may be provided at an inspection, but these are naturally not as imperative in the same way as legal demands.

Hazardous chemicals shall be stored separate from food and in places hard to reach for children. For example, products could be placed high up or in closed/locked cupboards.

The packages of hazardous chemicals should be safe, they should not leak during the product's use, and they should definitely not react with the chemical contents. If the product has a closure that makes it possible to reuse, the opening/closing device should have a lifetime as long as the package itself.

Containers with chemicals should not resemble those for foodstuffs, and this is particularly important in many countries where reuse of food containers are common. If such (reused) containers are found at stores, it is important to ensure that they meet the same legal requirements as new packages.

Control the following

- Is the storage of hazardous chemicals acceptable in the store?
- Are hazardous chemicals hard to reach for children?
- Are the packages safe and durable for normal use?
- Do packages resemble those for foodstuff?

Measures when observing violations

In a dialogue with the store owner, hard measures are rarely needed. When encountering serious deficiencies such as reused containers or leaking packages, there might be a need for stronger measures in line with legal demands.

8.4.4 Pesticides

As mentioned above, pesticides require approval in many countries. If this is the case, pesticides in the country need approval before they are sold. Controlling pesticides at retailers mainly focuses on this control.

Control the following

- Is the product approved according to the legal requirements? Does the product have a registration number (when applicable)?
- Is the labelling correct according to GHS and demands for use descriptions?

- Packaging and storage, see section 8.4.2

Measures when observing violations

The main task when controlling pesticides is to prevent non-compliant products from reaching farmers and other users. This means ensuring that the products that are sold are approved, labelled, and packaged according to the law so that the risks with using the products are minimised. If encountering counterfeit products or products that have not been approved, they should be taken off the shelves in the store. If the shortcomings are serious and pose great risks (e.g. lack of pictograms for hazardous products or lack of use descriptions for pesticides) and if the store owner does not intend to stop the sale, appropriate measures should be used to ensure that the product is prevented from being sold. This can be done by confiscating products or by placing a prohibition in connection with a fine, which is an efficient way to stop any sale.

Please also see the section 4.1 on GHS labelling and the [FAO Guidelines on compliance and enforcement of pesticide regulatory framework](#) (link in chapter 9).

9 Further literature

Guidance documents from the Swedish Chemicals Agency

<https://www.kemi.se/en/publications/guidance-on-national-chemicals-control-for-other-countries>

Control of chemicals placed on the market (brochure)

1/18: Sustainable financing of institutional capacity for chemicals control

2/18: Risk Reduction of Chemicals

3/18: Legislation on chemicals placed on the market

Further guidance's will be published.

Useful Reports and Guidelines

[UNEP Guidance on the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration \(LIRA-guidance\)](#)

[FAO Guidelines on compliance and enforcement of pesticide regulatory framework](#)

[Analyses by the Swedish Chemicals Agency in connection with enforcement 2008-2013 \(KemI Enforcement report 6/14\)](#)

GHS

General background and links to guidance documents (UNITAR):

<http://www.unitar.org/cwm/ghs>

Checklist for controlling SDS, common enforcement project material at the European Chemicals Agency (ECHA): <https://echa.europa.eu/regulations/reach/safety-data-sheets/checklist> (this page also contains “how to” information on compliance and recipient advice)

Hazard information on chemical substances

Classification and Labelling Inventory at ECHA: <https://echa.europa.eu/regulations/clp/cl-inventory>

eChem-portal (OECD):

http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

Conventions

Stockholm Convention – the POPs:

<http://chm.pops.int/TheConvention/ThePOPs/tabid/673/Default.aspx>

Rotterdam Convention – PIC:

<http://www.pic.int/TheConvention/Overview/TextoftheConvention/tabid/1048/language/en-US/Default.aspx>

Minamata Convention, product restrictions in annex A:

<http://mercuryconvention.org/Convention/tabid/3426/language/en-US/Default.aspx>

Annex 1: Checklist – inspection on site (general)

INTRODUCTION // SHORT PRESENTATION

- Background to the inspection, what will happen, and a short presentation of the authority
- Short presentation of the company (try to fill in the checklist in parallel with this presentation)

Company name		VAT no (or similar)	
Address		Phone	
		CEO or equivalent	
Contact person		E-mail	

Date	
Attending from company	
Attending from authority	
Inspection within specific project	
Inspection registry no (or similar)	

COMPANY AREA OF OPERATION

When did the company start operations?	
Company classification	<input type="checkbox"/> Producer <input type="checkbox"/> Importer Other:
No. of employees within the country internationally	
Annual turnover?	
Suppliers? From what countries (if importer)?	
Clients?	
Warehouse?	<input type="checkbox"/> Yes <input type="checkbox"/> No

PACKAGING

Child-resistant fastening on products sold to the general public (when required)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Is it possible to distinguish the package from other products, e.g. food?	

ROTTERDAM CONVENTION

Do you export hazardous chemical products to other countries?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Do you import hazardous chemical products from other countries?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are your exported hazardous products labelled and accompanied by an SDS?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Are any of the exported chemicals valid for export notification in accordance with the Rotterdam Convention?	<input type="checkbox"/> Yes <input type="checkbox"/> No

PESTICIDES

Do you sell pesticides?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Do not know
If yes, what kind?	<input type="checkbox"/> Biocides (e.g. rodenticides, disinfectants) <input type="checkbox"/> Plant protection products

Are the products subject to an approval process?

CLASSIFICATION/LABELING AND SDS

Do you have anyone responsible for environment/quality/chemicals at the company?

What routines do you have for sound chemicals management (policies, goals, substituting hazardous products, etc.)?

What routines do you have for classification and labelling? Who is responsible? (delegation order)

Where do you find information? How do you keep up to date?

Who is producing labels?

Routines for production of SDS?

Updating of SDS?

Do you hire a consultant?

Yes No

How do you distribute SDS to clients?

Through e-mail? Web page? On paper?

How many products have been controlled at the inspection?

SUMMARY OF THE INSPECTION

Deficiencies observed at the inspection

How should these be corrected?

Keep note of the deficiencies that will need an injunction and which the company themselves claim they will correct voluntarily

- Notify the company that they will receive a formal protocol that will either close the case or impose corrections
- Hand out relevant information materials
- Summarise and conclude the inspection

Annex 2: Checklist – SDS

Introduction

A checklist can be used as an effective tool in enforcement, but to ensure enforcement is effective and relevant, strategic planning and prioritisation will be needed

This annex is divided into four sections:

- Background: information about the inspected company, substance, etc. including some general questions
- Recipient Questions: apply if the company being checked is a recipient, rather than compiler, of the SDS
- On-site Checklist: a small number of questions about the SDS that an inspector can check onsite
- Office-based Checklist: a detailed check of the contents of all 16 Sections and subsections of the SDS

A “Safety data sheet checklist” developed for the EU REACH regulation is publicly available on the European Chemicals Agency’s (ECHA) website¹⁸. This annex includes some parts from that checklist.

This is only an example of a generic checklist for inspection of SDS under GHS

- It must be adapted to national legislation before use.
- It does not include all information needed to perform an inspection, nor does it reflect all aspects that would be required or controlled by an enforcement authority.
 - o To be effective, the checklist should be modified, as appropriate, for the relevant inspection(s) or inspection project.

¹⁸ (<https://echa.europa.eu/>) ECHA > REACH > Communication in the supply chain > Extended safety data sheets > Safety Data Sheet Checklist

BACKGROUND

Company Name	
Company Address	
Company Size (for example in relevant ranges of employees)	
Reference number for inspection (if used)	
Product Identifier	
SDS/Supplier Identifier (if not same as inspected company)	
Inspector/Authority	
Date of inspection	

Question	Roles	Remarks
What is the company's role regarding the substance/mixture? Company can have multiple roles	<ul style="list-style-type: none"> • Manufacturer of the substance/mixture • Importer of the substance/mixture • Supplier of the substance/mixture 	

Question	Answer	Remarks	Note
What is the SDS for?	Substance/mixture		Choose one option only
Is an SDS required under legislation?	Yes/no		If NO then do not answer any further questions (legal requirements do not apply even if the format has been followed). If known why the SDS has been compiled, even though not required, this can be given in the remarks.
Is the company the compiler or recipient of the SDS?	Compiler/recipient		Choose one option. If recipient is selected, the company is not responsible for the content of the SDS, use Recipient Questions. If Compiler is selected, then it is not necessary to answer Recipient Questions.

QUESTIONS FOR RECIPIENT OF SDS

The following questions are relevant if the company is a recipient of the SDS.

#	Question	Response	Remarks	Notes
1	Did the recipient receive the SDS automatically?	Yes/no		Answer should be NO if the SDS had to be requested.
2	Is the SDS available in the national language(s)?	Yes/no		
3	Are the appropriate Risk Management Measures (RMMs) applied onsite consistent with the recommended Risk Management Measures in the SDS?	Yes/no		This is a general check. RMMs should be in line with the substance classification, and advice provided in Sections 4-8.
4	Did the recipient find any deficiencies in the SDS?	Yes/no		If YES, then please explain actions in question 5. If NO, then question 5 can be left blank.
5	Did the recipient attempt to contact the supplier/compiler of the SDS to address the deficiencies?	Yes/no		While the recipient is not responsible for the SDS content, if the recipient receives a deficient SDS, then they should at least have attempted to contact the supplier and documented this.

ON-SITE CHECKLIST

The following questions are items that an inspector can check on-site. Please use the notes as a guide. In general, answering NO to any of the parts of the first 7 questions requires some explanation to be provided in the Remarks field. Question 7 can be used to indicate particular elements/sections of concern that should be checked in the Office-based Checklist.

#	Question	Remarks	Notes
1	Is the SDS (or information from the SDS) accessible to the workers? <ul style="list-style-type: none"> • Present? yes/no • Adequate, appropriate? yes/no 		If Answer is NO for Present or Adequate/Appropriate, then provide further info in the Remarks field.
2	Does the SDS contain information in all 16 sections? <ul style="list-style-type: none"> • Present? yes/no • Adequate, appropriate? yes/no 		If answer is NO for Present, then indicate missing or incorrect sections and subsections. Details about individual sections can be provided in the office-check.
3	Is the SDS available in the national language(s) <ul style="list-style-type: none"> • Present? yes/no • Adequate, appropriate? yes/no 		If Answer is NO for Present or Adequate/Appropriate, then provide further info in the Remarks field.
4	Does the SDS information match the label information? The label information should be consistent with the relevant information indicated in Section 1, 2, and 3 of the SDS (identifiers, hazards, and composition). <ul style="list-style-type: none"> • Present? yes/no • Adequate, appropriate? yes/no 		If Answer is NO for Present or Adequate/Appropriate, then provide further info in the Remarks field.
5	Is the date of compilation/revision date and version number indicated on the 1st page? <ul style="list-style-type: none"> • Present? yes/no • Adequate, appropriate? yes/no 		If revision date is indicated, then check to see if changes have been as indicated in Section 16 or elsewhere in the SDS.
6	Is there a page number on every page as well as an indication of the length of the SDS (e.g. page 1 of 17)? <ul style="list-style-type: none"> • Present? yes/no • Adequate, appropriate? yes/no 		If Answer is NO for Present or Adequate/Appropriate, then provide further info in the Remarks field.
7	Is a more detailed evaluation of the SDS recommended? Yes/no		If answer is YES, then the office-based check should be carried out. Request a copy of the SDS and the label for later detailed evaluation.
8	Any additional comments		Any additional comments, e.g. immediate observations, sections of particular concern, etc.

OFFICE-BASED CHECKLIST

The checklist includes the 16 sections required in GHS. Not all subsections are required, see GHS and/or national legislation for requirements. An inspection can focus on some or all of the sections, and the checklist should be adapted as appropriate.

Sect.	Check	Response		Remarks
1:	Identification			
1.1	Product identifier (name, unique identifier e.g. CAS No.)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
1.2	Other means of identification (e.g. other names)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
1.3	Recommended use of the chemical and restrictions on use	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
1.4	Details of the supplier of the SDS (full address, telephone number, etc.).	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
1.5	Emergency phone number	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
2:	Hazard identification			
2.1	Classification of the substance or mixture	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
2.2	Label elements, include? <ul style="list-style-type: none"> Hazard pictogram(s) Signal word(s) Hazard statements Precautionary statements 	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	If only Hazard/Risk codes are given, is there a reference to Section 16?	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
2.3	Other hazards that do not result in classification (e.g. dust, explosion hazard, phototoxic, etc.)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
3:	Composition/information on ingredients			
3.1	Substance – chemical identity of the substance	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	

Sect.	Check	Response		Remarks
3.2	Mixture <ul style="list-style-type: none"> Concentration (ranges) Classification 	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
4:	First-aid measures			
4.1	Description of first aid measures			
	Subdivisions for all relevant exposure routes (inhalation, skin contact, eye contact, ingestion)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Advice whether (a) immediate medical attention is required and if delayed effects can be expected after exposure; (b) movement of the exposed individual from the area to fresh air is recommended; (c) removal and handling of clothing and shoes from the individual is recommended; and (d) personal protective equipment for first aid responders is recommended.	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
4.2	Most important symptoms and effects, both acute and delayed	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
4.3	Indication of any immediate medical attention and special treatment needed	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
5:	Fire-fighting measures			
5.1	Extinguishing media (suitable and inappropriate)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
5.2	Special hazards arising from the substance or mixture (e.g. exhaust product)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
5.3	Special protective actions for fire fighters	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
6:	Accidental release measures			

Sect.	Check	Response		Remarks
6.1	Personal precautions, protective equipment and emergency procedures <ul style="list-style-type: none"> For non-emergency personnel For emergency responders 	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
6.2	Environmental precautions (precautions against emission)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
6.3	Methods and material for containment and cleaning up. Any other issues relating to spills and releases.	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
7:	Handling and storage			
7.1	Precautions for safe handling	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Advice that: (a) allows safe handling of the substance or mixture (b) prevents handling of incompatible substances or mixtures (c) draws attention to operations and conditions that create new risk by altering the properties of the substance or mixture (d) minimises the release or reduces the release of the substance or mixture to the environment	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Advice on general occupational hygiene	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
7.2	Conditions for safe storage, including any incompatibilities (a) Manage risks – avoid (b) Control effects (c) Maintain the integrity of the substance or mixture (d) Other advice	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
8:	Exposure controls/personal protection			
8.1	Exposure control parameters <ul style="list-style-type: none"> National occupational exposure or biological limit values Information on currently recommended monitoring procedures Details of any control banding approach used 	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	

Sect.	Check	Response		Remarks
8.2	Appropriate engineering controls	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
8.3	Individual protection measures, such as personal protective equipment (PPE)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
9:	Physical and chemical properties and safety characteristics			
9.1	Information on basic physical and chemical properties	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
9.2	Further safety characteristics (supplemental)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
10:	Stability and reactivity			
10.1	Reactivity	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
10.2	Chemical stability	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
10.3	Possibility of hazardous reactions	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
10.4	Conditions to avoid	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
10.5	Incompatible materials	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
10.6	Hazardous decomposition products	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
11:	Toxicological information			
	Information on toxicological effects (see GHS for hazards for which data should be provided)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Information on the likely route of exposure	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Symptoms related to the physical, chemical, and toxicological characteristics	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	

Sect.	Check	Response		Remarks
	Delayed and immediate effects and chronic effects from short and long-term exposure	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Numerical measures of toxicity (such as acute toxicity estimates)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Interactive effects	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Where specific chemical data are not available – use of generic data	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Mixtures – tested or based on ingredients	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Other information	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
12.	Ecological information			
	Toxicity	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Persistence and degradability	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Bioaccumulative potential	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Mobility in soil	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
	Other adverse effects	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
13.	Disposal considerations			
	Disposal methods	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
14.	Transport information			
14.1	UN number	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
14.2	UN proper shipping name	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	

Sect.	Check	Response		Remarks
14.3	Transport hazard class(es)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
14.4	Packing group (if applicable)	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
14.5	Environmental hazards	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
14.6	Special precautions for user	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
14.7	Transport in bulk according to IMO instruments	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
15:	Regulatory information			
	Specific safety, health, and environmental regulations/legislation	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	
16.	Other information			
	(a) indication of changes from previous versions (b) list of abbreviations/acronyms (c) list of key references/sources of Information	Present? Adequate, appropriate? Not checked? Not applicable?	yes/no yes/no yes/no yes/no	

	Conclusions from inspection (tick one)	Remarks
	SDS is adequate, some minor improvements are suggested:	
	SDS is deficient in the following sections:	
	Other:	

Actions, comments, follow-up:

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