



CHEMICAL COMPLIANCE

Development of a GHS classification tool for chemical mixtures

The United Nations (UN) model regulation on classification and labelling of chemicals – known as Globally Harmonized System of Classification and Labelling of Chemicals (GHS) – is being rapidly implemented all over the world. Many regions and countries, like the USA, Europe, China and Japan, which have chosen to adopt GHS, have regulatory systems in place to comply with it. Chemical legislation in itself is complex to comply with and even more so in a global market. This is especially the case when companies need to fulfil both national regulations and legislation implemented in overseas markets. In order to make it easier for companies to stay compliant with the different forms of GHS implementation worldwide, we developed a classification tool – ChemClass.

EASIER PRODUCT PLACEMENT WITH CHEMICAL COMPLIANCE

The GHS establishes agreed hazard classification criteria and communication provisions. It was introduced so that consistent criteria could be used for classification and labelling of chemicals on a global level. It aims to ease a company's task of complying with the regulations on hazard communication for chemicals when dealing with different markets. However, although systems may be similar in content – and ideally the same, as implied in the use of the term 'Harmonized' in GHS – there can still be significant differences in how the rules are implemented among different countries or regions. What this means is that

CLIENT

- Chemical industries
- Small and medium-sized enterprises
- Local and national authorities
- Universities and research institutes

CHALLENGE

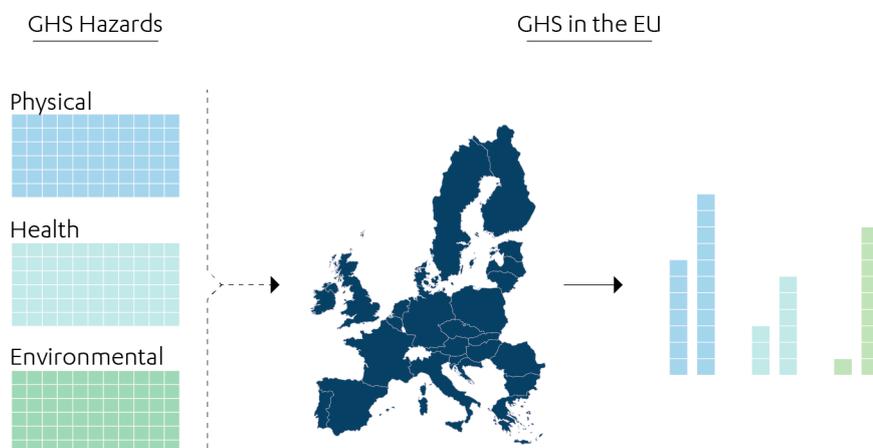
Staying compliant with the different worldwide implementations of GHS

SOLUTION

ChemClass – a software tool which is able to classify chemical mixtures according to the national or regional implementations of GHS

VALUE

- Ability to calculate classifications easily – just a few clicks to get the correct classification of your product.
- Having consistent, up-to-date knowledge of classification requirements
- Easier product placement in both national and global markets



companies are now still facing challenges when commercialising their products in the international markets.

The UN's GHS is based on a 'building blocks' approach, where the nature of the hazard within a substance or a mixture is described through hazard classes and categories. Each hazard class and category represents one building block. Regulatory authorities in countries adopting the UN model regulation build their national GHS by implementing all or part of the UN's building blocks while keeping the agreed hazard classification criteria.

DEVELOPMENT OF A CLASSIFICATION TOOL – CHEMCLASS

To help companies stay compliant with the different forms of GHS implementation throughout the world, we developed a classification tool – ChemClass.

ChemClass is developed as an add-in module to our chemical management system, ChemManager®.

Our extensive knowledge of worldwide chemical regulations – in particular, GHS – means that we are aware of the hazard classes and categories selected by specific countries when they put together their GHS-based classification and labelling regulations. The list of countries and regions that we regularly monitor for updates in the chemical regulations includes the European Union, the USA, China and Korea, just to mention some.

ChemClass is delivered with a set of classification areas which correspond to selected countries and regions with the related setup of hazard classes and categories.

Administrators are allowed to edit the existing classification areas by modifying or adding hazard classes and categories, as well as by adding new countries and regions. This allows our GHS team to constantly update ChemClass in order to:

- follow the planned biennial revisions of the UN's GHS
- follow the changes in the chemical regulations at national level
- widen the selection of countries and regions as they implement GHS

The constant updating ensures that the company stays compliant with GHS implementation worldwide.

STAY COMPLIANT WITH GHS WORLDWIDE USING CHEMCLASS

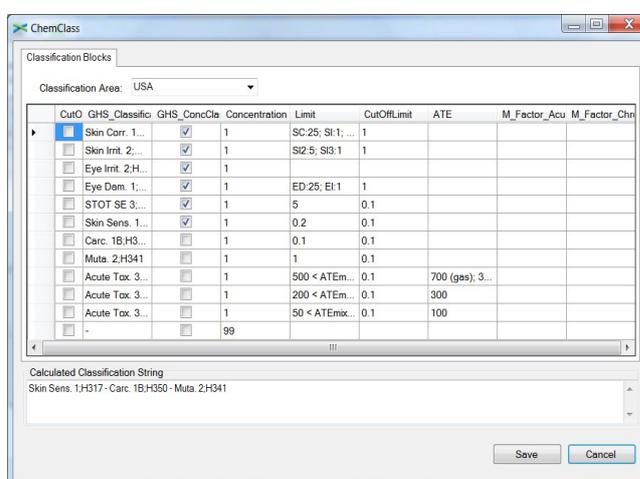
With just a few clicks, ChemClass enables you to classify chemical mixtures according to the calculation methods of GHS and further tailors results based on country and/or region of interest.

ChemClass supports ChemManager® substance database, which includes substances with harmonised classifications as required in some regions and countries, such as the

European Union and Korea. Such substances are part of the public database and are shared by all users.

In addition to the public database, the user is allowed to add substances locally on the company account, in order to include substances that constitute the ingredients of the products but do not appear in the public database. This way, the user only has to enter the composition of the product by selecting the relevant substances and assigning the related concentrations. A simple click will then run ChemClass.

The output produced is a classification string that contains the hazard classes and categories that are implemented in the chosen country. The classification string can then be used in the safety data sheet of the product and to select the label elements that constitute a compliant hazard label in the country or region of interest.



ChemClass calculation of a mixture classification according to US GHS (OSHA 2012). ©DHI

CHEMCLASS - HELPING YOU IN MORE WAYS THAN ONE

- User-friendly interface
- Always up-to-date national classification requirements
- Your key to international markets

HOW TO ACCESS THE TOOL

ChemClass is available as:

- an independent module to DHI ChemManager®
- part of a consultancy service

Please contact us for more information.

Contact: info@dhigroup.com

For more information, visit: www.dhigroup.com