

Globally Harmonized System



Global Responsibility – a global solutions

The chemical industry is responsible for the impact its products have on humans and the environment worldwide. Communication on properties and proper handling of chemical products must be ensured globally across all cultural regions and linguistic boundaries. Honeywell Specialty Materials also has to fulfill this obligation. One important aspect is the correct labelling of chemicals.

Today, there are a number of different classification and labeling systems for chemicals in use throughout the world, leading to different standards of protection. As a result of the globalization of markets, chemicals are now produced in one location and then used in another, potentially far distant, location. This means that different cultural and economic regions are being affected and transportation has become more complex.

A harmonized system of classification and labeling is needed in order to ensure that the requirements of occupational health and safety, consumer protection and environmental protection are being adequately observed internationally.

Honeywell implements the "Globally Harmonized System"

The introduction of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) was an important step in the right direction. GHS, introduced with the latest EU legislation, is replacing the old system that has been in effect for more than 40 years in Europe, and facilitates global harmonization. In this way, a standardized basis for the evaluation of the characteristics of chemical products is being created. The GHS can also be adopted by countries that have never had own regulations in place or have never been affiliated to an existing transnational system. GHS has already been implemented in several countries in Asia.

The changes do not only affect the manufacturers, but also the suppliers and users of chemicals. All products must be checked by the manufacturers and suppliers and, if required, reclassified and relabelled. All users must familiarize themselves with the new regulations as quickly as possible to allow harmonization to take effect.

Rigorously planned and now implemented

The idea of a globally harmonized system is the result of a 1992 United Nations initiative. The content of the GHS was adopted by a UN Commission in 2002.

The EU GHS Regulation (CLP) entered into force in January 2009 and is being gradually implemented at the present time. This means that up to December 1, 2010, all substances produced and imported (in parallel to the implementation of the REACH Regulation) must be classified and labelled according to the new system. The same applies to preparations, now called mixtures, up to June 1, 2015. A 2-year transitional period applies to inventory.

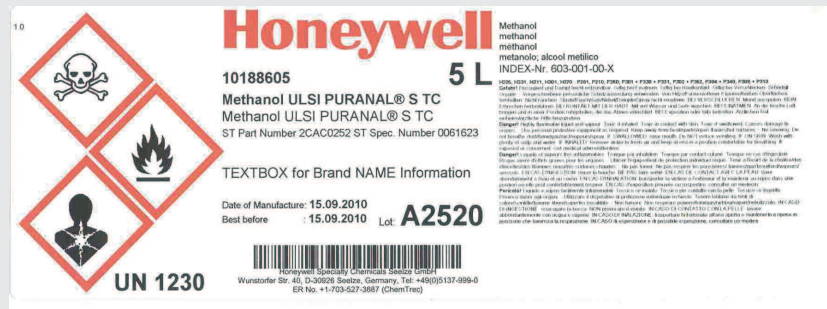
What's new?

The changes in relation to the existing EU system are not insignificant. The GHS is based on a completely new concept. For this reason, it is not possible to integrate the GHS into existing systems or to apply it directly. Classification and labeling are also carried out according to different rules.

It is primarily the labels on the chemical containers and the safety data sheets that are affected by the implementation.

New labels and their elements:

- Hazard pictograms
- H-statements
- P-statements
- EUH-statements



Previously: Danger symbols and indication of danger

Now: Hazard pictograms with a signal word

The most visually striking aspect of the changes are the new hazard pictograms. Black symbols in an orange-colored square, used previously, will disappear. Squares with a red border standing on their apex are new (diamond-shaped) and the pictogram will be printed in black on a white background.

Most of the pictogram contents are similar to the old symbols. There are, however, three new ones; the old St. Andrew's cross indicating "hazardous to health" or "irritant" is no longer valid. Furthermore, the classifications are different.

The signal words "Danger" and "Warning" have been added to the labels

Previously: S-phrases (safety advice)

Now: P-statements (precautionary statements)

The P-statements are standardized formulations that provide safety instructions for handling the substances and mixtures. The P-statements also are divided into the groups "General" (H-100-series), "Prevention" (H-200-series), "Response" (P-300-series), "Storage" (H-400-series) and "Disposal" (P-500-series).

New now: EUH-statements

These instructions go beyond the regulations of the GHS and are only valid within the EU because of partly stricter EU legislation. They should be specified after the H- and P-statements.

Previously: R-phrases (risk phrases)

Now: H-statements (hazard statements)

The H-statements are standardized formulations describing hazards that are attributed to substances or mixtures. They are divided into "Physical hazards" (H-200-series), "Health hazards" (H-300-series) and "Environmental hazards" (H-400-series).

Differences in assigning Hazard symbols and Hazard pictograms

Dangerous Substance- and Preparations Directive
Old System

CLP Regulation
New System

Combustible: organic peroxide		Organic peroxide* Type C, D, E & F	
Flammable	no symbol	Flammable liquids: Category 3	
No entry applicable		Gases under pressure	
No entry applicable		Self-heating substances and mixtures	
No entry applicable		Corrosive to metals	
Acute lethal effects: Xn		Acute toxicity: Category 4	
Non-lethal irreversible effects: T+ and T Severe effects after repeated or prolonged exposure: T		STOT** (single exposure): Category 1 STOT** (repeated exposure): Category 1	
Non-lethal irreversible effects: Xn Severe effects after repeated or prolonged exposure: Xn		STOT** (single exposure): Category 2 STOT** (repeated exposure): Category 2	
Aspiration hazard		Aspiration hazard: Category 1	
CMR properties: Category 1 and 2		CMR properties: Category 1A and 1B	
CMR properties: Category 3		CMR properties: Category 2	
Respiratory sensitization		Respiratory sensitization	
Skin sensitisation		Skin sensitisation	
Serious damage to the eye		Serious eye damage	
Skin irritation Eye irritation Respiratory irritation		Skin irritation Eye irritation Respiratory irritation***	
Narcotic effects	no symbol	Narcotic effects***	
Dangerous for the ozone layer	no symbol	Hazardous to the ozone layer	no pictogram

* Organic peroxides Type B are to be labeled with the both, the exploding bomb and flame pictogram

** STOT = Specific Target Organ Toxicity

*** This effect is different than STOT (single exposure) – Category 3

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