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On-farm impact of the GHS criteria

Use of the GHS Criteria in South Africa

The Globally Harmonized System for Classification and Labelling of Chemicals (known as the GHS criteria for short) is incorporated into South African legislation and will have an on-farm impact going forward. The latest developments include a notice from the Registrar under Act 36 of 1947 to implement the GHS criteria for chemical hazard classification. This implies that all agricultural remedies and fertilizer labels and safety datasheets must be GHS compliant. Furthermore, active substances classified within certain hazard groups (1A or 1B carcinogenic, mutagenic or reproductive toxin) are due to be phased-out in South Africa by June, 2024. These two aspects are addressed in this edition of the Cutting Edge.

The Department of Employment and Labour also recognizes and includes the GHS standards under the Occupational Health and Safety Act No. 85 of 1993, applying to self-employed or employees who carry out work at a workplace which may expose any person to a hazardous chemical agent and manufacturers, importers, suppliers or retailers of such chemicals that are intended for use at the workplace.

What is the GHS criteria and why is this important?

Globally there are many different approaches on how to identify the hazardous properties of chemicals and how information about these hazards is communicated to users through labels and safety data sheets. This causes many grey areas, because the same chemical can have a different hazard classification in different countries. For example, a chemical could be labelled as toxic in one country, but not in another. This scenario can create a barrier to international trade. The GHS is a single worldwide system for classifying and communicating the hazardous properties of industrial and consumer chemicals. GHS uses hazard class and category to describe the nature and severity of chemical substances, products, mixtures, preparations, formulations and solutions. The GHS sits alongside the UN Transport of Dangerous Goods system and is sometimes referred to as the Purple Book reflecting the purple binding of the hard copy of the criteria. The ninth revised edition of the GHS published in 2021 is the most recent revised edition.[1,2]

The purpose of the GHS is to enhance the protection of human health and the environment by providing an internationally comprehensible system for hazard communication, to provide a recognized framework for countries that do not have a classification system, to reduce the need to test chemicals on animals (the GHS does not promote further testing to address adverse health outcomes, and classification is based on existing, available data) and to facilitate international trade in chemicals and products which hazards have been properly assessed and identified on a global basis. This is important, because no country has the ability to identify and specifically regulate every hazardous chemical product and many different countries have to come to the same conclusion about using information dissemination as a regulatory means to address chemical hazards.[1,2]

Currently, there are 29 hazard classes in GHS (including physical, health and environmental hazards), among which the following are commonly seen on product labels: flammability, acute toxicity, skin corrosion or irritation, etc. The **Carcinogenic, Mutagenic** and **Reproductive Toxins** (CMRs) are of specific concern due to the long term and serious effects that they may exert on human health. The CMR substances are classified into one of three groups under GHS (depending on severity of the associated hazards)[3]:

Category 1A: Known human carcinogen, mutagen or reproductive toxin largely based on human evidence (positive results from human epidemiological studies).

Category 1B: Presumed human carcinogens, mutagens or reproductive toxins from animal and/or human evidence.

Category 2: Suspected human carcinogen, mutagen or reproductive toxin based on limited evidence from animal and/or human studies.

What does this practically imply?

The two most obvious impacts of the introduction of using GHS criteria in crop protection regulatory matters are changes to product (container) labels and the withdrawal of some substances with specific hazard classifications.

Product label changes

The previous colour bands with pictograms used in South Africa are falling away. This was the WHO/ FAO classification system that only regarded the acute and/or dermal toxicity profile of the main active ingredients for classification. GHS compliant labelling will include a set of new pictograms.

Registration holders started to submit new labels to the Registrar's office from April, 2022. The Minister of Employment and Labour of the Occupational Health and Safety Act notified that manufacturers and/or suppliers of chemicals may continue to supply existing stock-in-trade that are non-GHS compliant, provided that the chemical was manufactured or imported (landed and not in transit) prior to 29 September, 2022. The exemption will be for a period of 12 months, ending 30 September, 2023, when all labelling and safety data sheets shall be GHS compliant.

Producers are encouraged to familiarise themselves with the new pictograms which will be seen on plant protection product labels in the future. It is important to correctly interpret these pictograms to understand what effect the chemicals you are using may have on humans, animal/bird/aquatic life, and/or the environment. Subsequently, health and safety training of plant protection product users is of paramount importance. Please see the Occupational Health and Safety Act: Regulations: Hazardous Chemical Agents, 2021 for more information on training and instructions required for any employee working with hazardous chemical agents, duties of persons who may be exposed to these chemicals, assessment of exposure, etc.[4]

How chemicals are stored and disposed of (including the empty containers) still remains of critical importance. Certification schemes (e.g. GlobalG.A.P. and SIZA) include local legislation, implying that the GHS criteria will be taken into account.

Feel free to contact Paul Hardman (ph@cga.co.za) or Paula Bester (pb@cga.co.za) if you are looking for service providers currently known to the CGA for GHS training or pictogram posters.

Withdrawal of key active substances

In April 2022 the Registrar notified the product registration holders that active substances with GHS classifications of 1A or 1B carcinogenic, mutagenic or reproductive toxin will be withdrawn from June, 2024. CGA has been involved in a process with Registration holders and experts in this field to identify which active substances have such classifications, and CGA are engaging further to determine what possible risk mitigation steps could be used to reduce the impact of this policy. In particular, what on-farm and industry-wide steps could be taken to maintain the use of some key Citrus Black Spot control options that otherwise might be withdrawn. Further communication will be shared with growers regarding the progress of these activities.

The sudden introduction of these measures is also a matter of concern to CGA and processes are underway to establish if the end-users of crop protection products were sufficiently consulted before the decision to introduce these new policies was taken.

References

1. Background: Globally Harmonized System (GHS). Health and Safety Executive of Great Britain. Website URL: https://www.hse.gov.uk/chemical-

classification/legal/background-directives-ghs.htm
2. Regulatory Aspects: Hannelie Marais (personal communication).
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Ninth revised edition, United Nations, New York and Genova, 2021. URL: https://unece.org/sites/default/files/2021-09/GHS_Rev9E_0.pdf
4. The Department of Employment and Labour, No. R. 280 of 29 March, 2021. Occupational Health and Safety Act, 1993. Regulations for Hazardous Chemical Agents, 2021. URL: https://www.gov.za/sites/default/files/gcis_document/202103/44348rg11263gon280.pdf

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