

# Korean Initiative of GHS Activities

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**Abstract:** To implement a globally harmonized system of classification and labelling of chemicals (GHS) in Korea, an interministerial GHS committee involving 6 ministries established an expert working group composed of 7 experts from relevant organizations and one private consultant to prepare an official Korean GHS version by March, 2005. As such, the translation and review of the official Korean GHS version, including annexes, started in October, 2004 and was completed on March 15, 2005. The official Korean GHS version has now been posted on the websites of the relevant ministries and organizations to solicit public opinions. The official Korean GHS version will be finalized after a public hearing scheduled for May, 2005. Collaborative efforts as regards implementing and disseminating the GHS in Korea will be continued to avoid any confusion or duplication and for effective use of resources.

**Key words:** GHS, Korea, Korean official GHS version, UNCED, Implementation of GHS in Korea

## Introduction

The globally harmonized system of classification and labelling of chemicals (GHS) was originally adopted in 1992 at the United Nations Conference on Environment and Development (UNCED), as subsequently reflected in Agenda 21 chapter 19. The work was coordinated and managed under the auspices of the Interorganization Programme for the Sound Management of Chemicals (IOMC) Coordinating Group for the Harmonization of Chemical Classification Systems (CG/HCCS). The technical focal points for completing the work

were the International Labour Organization (ILO); Organization for Economic Cooperation and Development (OECD); and United Nations Economic and Social Council's Subcommittee of Experts on the Transport of Dangerous Goods (UNSCETDG). The work was finalized in October, 2002, and the World Summit on Sustainable Development in Johannesburg on 4 September, 2002 encouraged countries to implement the new GHS as soon as possible with a view to having the system fully operational by 2008<sup>1)</sup>. Implementation has already started with pilot countries introducing the system to their national practices in different regions of the world. The GHS text, called the purple book, became available as a UN publication in early 2003. The purple book has 4 parts

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with 450 pages; introduction, physical hazards, health and environmental hazards, and annexes. The introduction has 5 chapters; Chapter 1.1 Purposes, scope and application of the GHS, Chapter 1.2 Definitions and abbreviations, Chapter 1.3 Classification of hazardous substances and mixtures, Chapter 1.4 Hazard communication (labelling), and Chapter 1.5 Hazard communication (Safety data sheets). The part 2 physical hazards classified 16 categories; explosives, flammable gases, oxidizing gases, gases under pressure, flammable solids, self-reactive substances, pyrophoric liquids, pyrophoric solids, self-heating substances, substances which, in contact with water emit flammable gases, oxidizing solids, organic peroxides, and corrosive metals. The health and environmental hazards classified 10 categories; acute toxicity, skin corrosion/irritation, serious eye damage eye irritation, respiratory or skin sensitization, germ cell mutagenicity, carcinogenicity, reproductive toxicity, specific target organ system toxicity-single exposure, specific target organ system toxicity-repeated exposure, and hazardous to the aquatic environment. The annexes consisted of nine annex. The GHS system will be kept dynamic and regularly revised and made more efficient as experience is gained in its implementation. While national or regional governments are the primary audiences for this document, it also contains sufficient context and guidance for those in industry who will ultimately be implementing the national requirements that will be introduced<sup>1)</sup>.

The Japanese government published their official Japanese GHS version, the first in Asia, in April 2004 after starting work in January 2003 based on an interministerial chemical coordination committee involving 7 ministries, including the Ministry of Foreign Affairs, Ministry of Internal Affairs and Communications, Ministry of Health, Labour, and Welfare, Ministry of Agriculture, Forestry and Fisheries, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure, and Transport, and Ministry of Environment<sup>2)</sup>. Accordingly, similar to the Japanese GHS efforts, this paper presents the interministerial efforts involved in publishing the official Korean GHS version.

## GHS-related Activities in Korea

After the adoption and publication of the GHS purple book in 2003, several Korean ministries independently initiated GHS-related activities. The Ministry of Labor (MOL) in collaboration with the Korean Occupational Safety & Health Agency (KOSHA) instigated the translation of the GHS in early 2003 in preparation for a planned revision of the Industrial Safety and Health Act (ISHA) and its related regulations. Meanwhile, the Ministry of Environment (MOE) started

research projects in late 2003 to analyze the impact of adopting the GHS in Korea and possible revision of the Toxic Chemical Control Act (TCCA). The Ministry of Commerce, Industry, and Energy (MOCIE) also started research projects in 2004 as regards applying the GHS to Korean Industry Standards.

However, to consolidate these independent GHS-related activities by different ministries, the MOCIE called an interministerial (MOL, MOE, MOCIE, Ministry of Government Administration and Home Affairs, and Ministry of Foreign Affairs and Trade) meeting on April 9, 2004 to discuss effective implementation of the GHS, share information on current APEC (Asia Pacific Economic Cooperation) Chemical Dialogue activities, and explore common interests. Then, on July 20, 2004, an interministerial GHS committee (IGC) meeting was convened by the MOE, including the MOL, MOCIE, newly organized National Emergency Management Agency (NEMA) and Ministry of Maritime Affairs and Fisheries (MMAF), to discuss the implementation and introduction of the GHS in Korea. The consensus was to create an expert working group, consisting of experts recommended by the various ministries to translate and review the purple book, and hold frequent IGC meetings. The subsequent IGC meeting at the MOL on September 23, 2004 recommended members for the expert working group, including 7 experts from 6 ministries and one private consultant (Table 1), and their mandate was to collaborate to produce an official Korean GHS translated version by March, 2005 for dissemination nationwide.

## Publication of Official Korean GHS Translated Version

When translating the GHS purple book into Korean, the expert working group made every effort to apply terms already used in existing regulations, such as ISHA, TCCA, etc. Meanwhile, terms that did not appear in existing regulations were extensively discussed in group meetings. The expert group always attempted to reach a consensus and use Korean terminology, unless English terms were in common use, plus the Japanese GHS was used for reference. The translated version covered the entire purple book, including the 9 annexes, and at least three reviews were completed from October, 2004 based on the already published KOSHA version<sup>3)</sup> and NIER version<sup>4)</sup>. Each section of the purple book was assigned to experts according to their scientific and legal expertise, and different groups of experts used for each review, where the first review was finished on December 30, 2004, the second on January 21, 2005, and the third on February 11, 2005. The progress was checked and terminology extensively

**Table 1. Expert working group for official Korean GHS translated version**

Ministry	Relevant Organization	Number of expert
Ministry of Labor	Occupational Safety & Health Research Institute (OSHRI), KOSHA	2
Ministry of Environment	National Institute of Environmental Research (NIER)	1
Ministry of Commerce, Industry and Energy	Korea Toxicology Institute (KIT)	1
Ministry of Agriculture	National Institute of Agricultural Science and Technology (NIAST), Rural Development Agency (RDA)	1
Ministry of Maritime Affairs and Fisheries	Korea Maritime Dangerous Goods Inspection Center (KOMDIC)	1
National Emergency Management Agency	Korea Fire Equipment Inspection Corporation (KOFEIC)	1
Private Consultants	SafeChem	1

discussed at expert group meetings held between the deadlines. The expert group meeting for the final review was held at the KOMDIC from February 21–23 in Seoul. There was a great deal of difficulties in reaching consensus for terminology, since an English term can be translated to several Korean terms in each ministry. The expert group also tries to accommodate pure Korean words in stead of using Chinese terms in GHS translation to make understand easy for young generation, who were not well educated for Chinese character. As such, a consensus was reached for each uncertain term, every line of the translated purple book was checked, and all the chapters in the annexes were thoroughly examined. After some editorial work, the final version was completed on March 15, 2005 and submitted to the IGC meeting held at the NEMA on March 16, 2005. When discussing the dissemination of the official Korean GHS version nationwide, the IGC determined to post the official Korean GHS version on the websites of the respective ministries ([oshri.or.kr](http://oshri.or.kr), [www.ats.go.kr](http://www.ats.go.kr), [www.molab.go.kr](http://www.molab.go.kr), [www.moe.go.kr](http://www.moe.go.kr)) and relevant organizations ([www.toxmut.or.kr](http://www.toxmut.or.kr), [www.kscia.or.kr](http://www.kscia.or.kr)) for a certain time period to collect opinions, and schedule a public hearing for the middle of May, to be hosted by the Agency for Technology and Standards (ATS) at the MOCIE.

### Implementation of GHS in Korea

The collaborative efforts involved in publishing the official Korean GHS version was the first time the relevant ministries coordinated together to harmonize and mediate chemical-related regulatory affairs. Therefore, even though 7 different ministries and 12 legislative acts are currently responsible for managing and regulating chemicals in Korea<sup>5,6</sup>, the GHS will be introduced to Korea with consistent terminology, classifications, and labelling, thereby avoiding confusion for the public, employers, and workers. Accordingly, the terms, classifications, and labelling used in GHS-related regulations, such as ISHA, TCCA, the Fire Service Act, and Maritime

Dangerous Goods Code, will be harmonized through the IGC and based on the official Korean GHS version. The chemical regulatory ministries of the Korean government are scheduled to revise their respective regulations in line with the GSH by the end of 2005, and to enforce and adopt the GHS by 2008 after 2 yr of public notice. Meantime, various education and dissemination programs, such as a GHS guide book and computer programs to generate classifications and labelling for GHS, are planned. The Korean Society of Toxicology is scheduled to offer the first education program on the GHS on May 12, 2005. The Korea Institute of Fire Science and Engineering and Korea Specialty Chemical Industry Association are also planning GHS education courses for this spring.

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