

ASEAN Guidance Document on Globally Harmonised System (GHS) Implementation Alignment

An Initiative of the ASEAN Regulatory Co-operation Project (ARCP)
Developed by the Virtual Working Group on GHS Implementation Alignment
(VWG-GHS)

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Brunei – *Ministry of Energy and Industry*

Cambodia – *Ministry of Industry and Handicraft*

Indonesia – *Ministry of Industry and Responsible Care Indonesia*

Lao PDR – *Ministry of Industry and Commerce*

Malaysia – *Department of Occupational Safety & Health (DOSH) and Chemical Industry Council of Malaysia*

Myanmar – *Ministry of Industry, and Myanmar Chemical Industry Association*

Philippines – *Environmental Management Bureau and Chemical Industry Association of Philippines (SPIK)*

Singapore – *Ministry of Manpower and Singapore Chemical Industry Council*

Thailand – *Department of Industrial Works and Federation of Thai Industry-Chemical Industry Club*

Vietnam – *Vietnam Chemicals Agency and Chemical Society of Vietnam*

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1) Introduction

The establishment of the ASEAN Economic Community (AEC) provides an opportunity for the Association of Southeast Asian Nations (ASEAN) to create a single market and production base that encourages the free flow of goods, services, investments, skilled labor, and capital across borders. The AEC presents a particularly large opportunity because it is often trade between countries and regions that forms the basis for sustainable economic growth.

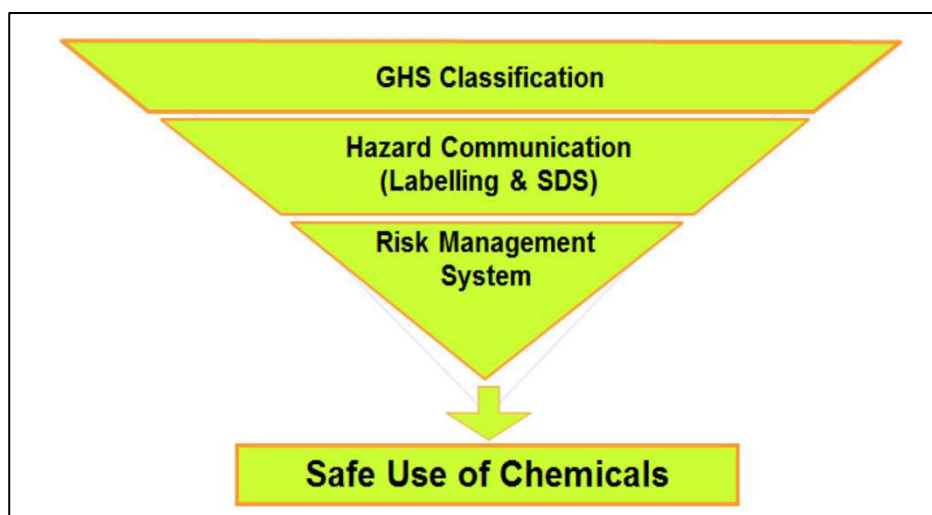
Enhanced regulatory cooperation has the potential to significantly reduce costs for governments and industries alike, while helping economies achieve their regulatory mandate of protecting human health, safety and the environment, without erecting unnecessary barriers to trade.

While approaches to regulating chemicals in various ASEAN member states may differ, there are common elements and challenges in efficient and effective operation. Currently, many ASEAN member states are implementing, or considering to implement the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). GHS is a system developed by the United Nations (UN) for hazard communication through harmonised provisions for standardised labels and safety data sheets (SDS), to improve workers' and chemical users' health and safety, ensure environmental protection, facilitate trade and reduce the need for testing and evaluation of chemicals.

The UN GHS is a key component for the sound management of chemicals and was introduced in 2003 with the publication of the first guidance of the Purple Book on a GHS for the Classification and Labeling of Chemicals (GHS) in 2004. It goes through a continuous update process led by UN Sub-Committee of Experts on the GHS (UN SCE GHS), where a new version is published on a 2-yearly interval. There are several variances in what and when GHS has been implemented by ASEAN member states. These variances impose substantial unnecessary costs and Non-Tariff Barriers (NTBs) along the supply chain in chemical trade where companies are required to adopt country-specific hazard communication systems, undermining the intended benefits of a globally harmonized system.

Many ASEAN member states are also considering to establish new or revisions to their current chemical control regulations and identifying current chemicals in commerce (chemicals imported, used, manufactured and stored). An aligned GHS approach will facilitate the prioritization of chemicals for risk assessment across the ASEAN member states.

The diagram below depicts the Globally Harmonised System (GHS) as a basis for chemical management:



2) ARCP VWG-GHS

The ASEAN Regulatory Cooperation Project (**ARCP**) – Virtual Working Group (**VWG**) on the alignment of United Nation (U.N). Globally Harmonized System for Classification and Labelling (**GHS**) is formed to coordinate and promote consistent implementation of GHS regulations in the ASEAN region. Divergence of GHS implementation amongst ASEAN member states has resulted in substantial trade barriers from different hazard classifications, Safety Data Sheet (SDS) and labelling requirements. Through cooperation and adoption of aligned GHS requirements, it will reduce diverging chemical management regulations and thus minimize trade barriers in the region.

The key considerations by the ARCP VWG-GHS are listed below:

- a) ARCP VWG-GHS is very supportive of the principles and objectives of GHS with respect to:
 - Enhancing the protection of human health and the environment by providing an internationally comprehensible system for hazard communication.
 - Providing a recognized framework for those countries without an existing system.
 - Reducing the need for animal testing and evaluation of chemicals.
 - Facilitating international trade in chemicals whose hazards have been properly assessed and identified on an international basis.
 - Ensuring proper hazard communication via Safety Data Sheets and labels.
- b) ARCP VWG-GHS acknowledges that there are certain aspects of the GHS where UN has left the competent National Authorities to decide and as such, this may lead to having different hazard classifications and requirements on the SDS and labels. Such differences could make the implementation of GHS challenging among ASEAN member states.
- c) ARCP VWG-GHS proposes the ASEAN GHS alignment to be based on GHS Purple Book revision-7 (2017), termed as ASEAN-7. This can be used as a guidance document whenever an ASEAN member state wants to implement GHS or revise the existing GHS regulation(s) in the country. The recommendations in

ASEAN-7 are established, referencing to a detailed matrix on GHS implementation which covers the overall landscape, GHS hazard classification (including building blocks and cut off/ concentration limits), GHS SDS and label requirements among 10 ASEAN member states, as well as the European Union (EU). This matrix was developed based on transparent sharing and exchange of information involving relevant stakeholders from both government and industry.

3) ASEAN-7

3.1 Goal & Objectives

The goal and objectives of ASEAN-7 are as follow:

- (a) To facilitate common approaches and synchronize implementation of GHS by the ASEAN member states.
- (b) To develop a mechanism to facilitate and maintain alignment as the GHS is updated or new requirements or standards are put into place. To explore innovative methods to jointly engage stakeholders as well as enhance collaboration on common interpretation and guidance materials.

3.2 Recommendations for considerations on GHS implementation

- (a) The ASEAN-7 guidance document recommends all ASEAN member states to adopt ASEAN-7 recommendations on GHS and to have one building block for ASEAN member states. ASEAN-7 further recommends setting up the prioritization sectors for implementation such as to first focus on industrial chemicals at workplace which cover suppliers, manufacturers, traders and chemical users in the supply chain. Eventually, this could expand to cover other sectors such as transport (emergency responders), consumers and pesticides users, leading to full GHS implementation in the country. Sufficient transition period with phased approach (e.g., substance and mixtures) should be allowed for industry to implement GHS. Appendix A (Overall Landscape / SDS Recommendations) provides some additional considerations in the overall landscape for GHS implementation.
- (b) ASEAN-7 recommends to promote inter-agencies dialogue, capacity building for regulators (competent authorities involved in chemicals management at local level) and industries (representatives from industry associations, academic, professional associations etc.) and encourage the formation of a leading agency with a national task force team encompassing relevant stakeholders to implement GHS.
- (c) ASEAN-7 recommends ASEAN member states to allow industries to do self-classification of the hazardous chemicals as they would have the necessary information to classify the chemicals. However, ASEAN-7 acknowledges the importance of providing sufficient guidance for Small and Medium Enterprises (SMEs) that may have limited capability to handle self-classification themselves. Hence, should authorities have/will publish GHS classification information for hazardous chemicals, ASEAN-7 suggests that such guidance information could be used as a recommendation or reference. Such listing should not be made mandatory as it will require the authorities to have additional systems

in place to allow Industry to ‘challenge’ the classification if they have additional data, as well as for periodic review and update of the listing and classification.

- (d) ASEAN-7 recommends the adoption of building blocks approach, which is the approach adopted for most economies (US/EU and other AP countries). Consistent with the principles laid out in the GHS, ASEAN-7 suggests dropping some of the lower degree of hazard classifications. This is from the consideration of data availability and alignment to approaches that have already been implemented in more established systems. Where data is available for such lower degree of hazard classification, industry could make this available. The list of such optional GHS building blocks which are not adopted in ASEAN-7 is summarized in Table A below. Appendix B (Classification Recommendations) provides the detailed information on ASEAN-7 recommendations on building blocks.

Table A: Summary list of optional GHS building blocks which are not adopted in ASEAN-7

Optional GHS classification – Not to be adopted in ASEAN 7
Acute Toxicity (Oral, Dermal, Inhalation) Category 5
Skin Irritation Category 3
Eye Irritant Cat 2B
Aspiration Hazard Category 2
Acute Aquatic Toxicity to the Environment Category 2 and 3
Chronic Aquatic Toxicity to the Environment Category 3 and 4
Flammable Liquid Category 4

- (e) For certain hazard class where GHS has left the competent national authorities to decide, ASEAN-7 recommends the adoption of the higher concentration limit cut-offs. This approach would align to ASEAN-7 recommendations to the EU GHS adoption as well as other Asia Pacific countries. Appendix B (Classification Recommendations) provides the details on ASEAN-7 recommendations on concentration limits.
- (f) ASEAN-7 recommends that the SDS and labels shall be the required tools for hazard communication of chemicals manufactured and imported in ASEAN member states. Periodic review and update of hazard classification and communication tools is recommended every 5 (five) years or when new data (that is critical and consider major change) emerged that would warrant an update within certain timeframe, e.g., 6 months.
- (g) ASEAN-7 recommends ASEAN member states implementing GHS to provide provisions for the protection of confidential business information (CBI) as outlined in GHS Rev 7 Chapter 1.4.8. Such provision should not compromise the health and safety of workers or consumers, or the protection of the environment. Such provisions are necessary to protect a company’s intellectual and proprietary information that are essential to protect the business interest in the marketplace.
- (h) For GHS SDSs, ASEAN-7 recommends the adoption of SDS format and disclosure limits of hazardous ingredients aligned with GHS Rev7 Chapter 1.5. SDS should be provided for all hazardous chemicals meeting the ASEAN-7 recommendation on GHS classification and for non-hazardous chemicals

containing hazardous ingredients above the SDS cut-off in GHS Rev 7. Table B below shows the cut-off values/concentration limits for each health and environment hazard class.

(i) *Table B: Cut-off values/concentration limits for each health and environment hazard class.*

Hazard class	Cut-off value/concentration limit
Acute toxicity	≥1.0%
Skin corrosion/irritation	≥1.0%
Serious eye damage/eye irritation	≥1.0%
Respiratory/Skin sensitization	≥0.1%
Germ cell mutagenicity (Category 1)	≥0.1%
Germ cell mutagenicity (Category 2)	≥1.0%
Carcinogenicity	≥0.1%
Reproductive toxicity	≥0.1%
Specific target organ toxicity (single exposure)	≥1.0%
Specific target organ toxicity (repeated exposure)	≥1.0%
Aspirational hazard (Category 1)	≥1.0%
Hazardous to the aquatic environment	≥1.0%

(j) For chemicals classified as hazardous under the GHS (according to ASEAN-7 recommendations on GHS classifications) and contained within a packaging/container that are been imported or introduced for sales or distribution shall require a full GHS label (See definition in Appendix B – Overall Landscape/SDS Recommendations).

A GHS label shall contains

1. Product Identifier
 2. Pictogram
 3. Signal word
 4. Hazard statement
 5. Precautionary statement
 6. Supplier information
- all others information may be included as supplementary information

For such labels, ASEAN-7 recommends the adopting of label elements aligned with GHS Rev 7 Chapter 1.4. Appendix B (GHS Labelling Recommendations) provides the additional ASEAN-7 Recommendation on GHS labeling.

(k) For small containers/packaging, ASEAN-7 recommends that a content of 125ml or less would be considered as small containers/packaging. Appendix B (GHS Labelling Recommendations) provides ASEAN-7 recommendation on the minimum information required for such small packaging/container.

For small container/ packaging, the label shall contain, at minimum,

- a) Product Identifier
- b) Pictograms
- c) signal word
- d) phrase of "Read SDS before use"

- (l) For hazardous chemicals produced for export only, ASEAN-7 recommends provisions to be made to allow the affixation of GHS labels, meeting requirements of destination country. This avoids having multiple GHS labels on such container/packaging. Where hazardous chemicals are imported and are in transit for re-export and stored in bonded warehouse, ASEAN-7 recommends that it is not necessary to re-label to meet local requirements and area labeling could be considered.

4) Conclusion and next steps

ARCP-VWG(GHS) strongly encourages all ASEAN member states to adopt ASEAN-7 Recommendations on GHS and to have one building block for all ASEAN member states. An aligned GHS approach through an enhanced regulatory cooperation among ASEAN member states will result in a more efficient and effective regulatory environment that allows economies to achieve their regulatory mandate of protecting human health, safety and the environment without erecting unnecessary barriers to trade.

With the recent GHS development and challenges, there is on-going discussion on GHS Mutual Acceptance/recognition Elements to promote broader or mutual acceptance of other GHS implementing regulations in the region as a key principle when promoting convergence of GHS implementation practices.

- Achieving a more consistent implementation of GHS
- Improving acceptance of other GHS implementation in other countries

There is on-going exchange on its applicability, benefits and its challenges among ASEAN member states.

ASEAN-7 will serve as a live document to provide guidance on the recommendations of GHS for ASEAN member states when GHS is newly adopted or existing GHS regulation(s) is updated. This document would be updated periodically to align to the developments in new GHS versions.

Appendix A: ASEAN-7 Recommendation on GHS alignment - Overall Landscape / SDS

Part 1 – Policy		
Items	Recommendation	Justification
Key agencies involved	To involve several agencies in GHS Development and Implementation	By involving multiple agencies in GHS Development and Implementation will have a better regulation outcome and get mutual understanding/ agreements/ commitments. It also supports the objective to consider the same GHS building blocks for one nation across all sectors and promote inter-agency dialogue. <i>E.g., Singapore (MOM/NEA/SCDF/SPF/AVA/MPA/CAAS/HSA/WSHC/ Enterprise Singapore) and Cambodia (MIH, MAFF, MOH and MPWT)</i>
Key agency that's leading the work	One Appointed Agency	To coordinate on GHS development/ improvement initiatives in order to avoid overlapped GHS requirements or registrations by different agencies. <i>E.g., Singapore – Ministry of Manpower (MOM), Cambodia - Ministry of Industry and Handicraft (MIH) and Malaysia – Department of Occupational Safety and Health (DOSH).</i>
Driving force	National GHS Task Force/ Committee / Inter-Ministerial Working Group such as government agencies, industry associations, academic.	National GHS Task Force/ Committee to be Subject Matter Expert (SME) on GHS. Optimize the resources and expertise. Enrich the outcomes as result of different opinion and competencies. <i>E.g., Singapore National Chemical Management and GHS task force co-chaired by Government agency (MOM) and SCIC (Singapore Chemical Industry Council) with representatives from all competent authorities, industry members (MNC and SME), associations (SISO) and academic (Singapore Polytechnic) and Cambodia Inter-Ministerial Working Group</i>
Local standard/guidelines	Set the hierarchy: GHS Regulation (in high level req's), GHS Technical Guideline (in form decree or circular for implementation purposes) and/or GHS Standard as needed	The good structure/ hierarchy will support better GHS implementation in the country. Technical guideline and or Standard will give sufficient reference for industries on the implementation. Clear guideline will minimize the agency effort to answer a lot of questions from industries. It gives more flexibility for revision in the technical guidelines.
Current GHS version adopted	Ver 2, 3 and 4 (Myanmar ver 5 but has not been implemented yet)	N/A
Accepting newer version of GHS as compared to current adopted version?	Yes	Newer version of GHS is the improvement and more progressive approach from the previous version

Items	Recommendation	Justification
<ul style="list-style-type: none"> • Future - Version of GHS adopted • Adaptation to the next GHS version and phase of implementation 	<p>Ver 7</p>	<p>Ver 7 is the newest version which is no significant differences compare to ver 6. For reference:</p> <ul style="list-style-type: none"> • <i>A new hazard class for desensitized explosives (Solid/Liquid) (Category 1-4) & a new hazard category for pyrophoric gases (Category 1A)</i> • <i>Miscellaneous provisions intended to clarify the criteria for some hazard classes (explosives, specific target organ toxicity following single exposure, aspiration hazard and hazardous to the aquatic environment)</i> • <i>Revised criteria for categorisation of flammable gases within Category 1</i> • <i>Miscellaneous amendments intended to clarify the definitions of some health hazard classes</i> • <i>Additional information to be included in the Safety Data Sheets (Section 9)</i> • <i>Additional guidance to extend the coverage of section 14 of the Safety Data Sheets to all bulk cargoes transported under instruments of the International Maritime Organisation (IMO), regardless of their physical state</i> • <i>A new example in Annex 7 addressing labelling of small packaging with fold-out labels.</i> • <i>Revised and further rationalized precautionary statements in Annex 3.</i>
<p>Scope of GHS Labelling - Definition of containers and packaging</p>	<p>Refer to CLP - Article 2 (36): ‘packaging’ means one or more receptacles and any other components or materials necessary for the receptacles to perform their containment and other safety functions; “packaging / containers” can also be further defined as “Any bag, barrel, bottle, box, can, cylinder, drum, intermediate bulk container (IBC) or the line that contain a hazardous chemical. Pipe or Piping systems, and engines, fuel tanks and other operating systems in a vehicle, tank containers, freight containers, carrying tank of a road tanker are not considered to be containers; should be considered as containers if they are used for storage”</p>	<p>It's to provide clearer reference to users. The identified containers (bag, barrel, bottle, box, can, cylinder, drum, intermediate bulk container (IBC) or the line) are used routinely for storage purpose while others (pipe or piping systems, and engines, fuel tanks and other operating systems in a vehicle, tank containers, freight containers, carrying tank of a road tanker) are regularly used for material transfer.</p>

Part 2 – SDS		
Items	Recommendation Proposal (with reference to the 2018 workplan)	Justification
SDS disclosure limit specified in legislation	Yes, specific SDS cut-off limits exist	Consistent with UN Purple Book guidance.
Additional sections?	None	N/A
Specific subheaders?	No specific requirement on the sub-headings of each section	16 sections in the given order as per UN guidance, with no specific requirements on sub headings, consistent with UN Purple Book guidance
Hazard Statements	Must show all on the SDSs	It is important to show all info on Hazard Statement on the SDS for hazard communication purposes.
Precautionary statements	Must show all on the SDSs	It is difficult to prioritize the Precautionary Statements to max 6 to be displayed on the SDS.
24 hours Emergency contact no.	SDS should contain the ER number	ER number is needed, in case of emergency. Emergency number to be included in section 1 SDS.
Mandatory for which products?	For all hazardous products and/or containing hazardous ingredients above SDS cut-off	Consistent with UN Purple Book guidance.
CBI - Declaration/disclosure of hazard components	<p>The general principles for the disclosure of CBI in SDSs and labels:</p> <ul style="list-style-type: none"> • It should be limited to the names of substances (include substance identification number) and their concentrations in mixtures (in range); • Where CBI has been withheld, the SDS and the label shall indicate; • CBI should be disclosed to competent authority upon request. Specific channel in gov agency to receive CBI information directly from the company. 	CBI is needed to protect the company intellectual proprietary to support the business competitiveness of the company. This provision should not compromise the health and safety of employees or consumers or the protection of the environment. The specific channels in government agency to receive CBI information directly from company is needed for better tracking and limited circulation of confidential information.
Specific requirements - e.g., reporting?	None - still accommodate for the existing req's such as CIMS, SIINAS, Classification record	The specific requirements e.g., reporting will result in extensive administrative resources (to submit, review and acknowledge) and cost from both governments and industries. The integrated reporting system among Ministries will be preferred to avoid the multiple/ similar reporting.

Part 3 – Implementation		
Items	Recommendation Proposal (with reference to the 2018 workplan)	Justification
Implementation	Recommended Requirements	
Good practices/guidelines	<p>Good Practices:</p> <ul style="list-style-type: none"> • Guidebook/ Technical Guideline/ GHS Standard on the GHS classification and Labelling of Chemicals • GHS comics, leaflets and posters. • GHS website: GHS FAQ, Labelling tools, examples. • GHS implementation checklist • On-line training module, webinars • Sharing best practices (MNC and SME) • Pilot project to support SMEs on GHS implementation 	To encourage good practices and knowledge sharing among different industries and enhance the effectiveness of GHS implementation by all sectors/ stakeholders.
Implementation -timeline	<p>Divided in 2 phases with sufficient grace period:</p> <ul style="list-style-type: none"> • phase 1. Substances • phase 2. Mixtures <p>May add additional stages as needed according to country existing reg's</p>	GHS implementation for mixtures will require more time (longer grace period) compare to substance, due to the complexity of classification and number of impacted products
Implementation-scope	Industrial chemicals at the Workplace as the 1st priority to implement.	Industrial chemicals at the Workplace as the 1st priority to implement. In the workplace, the chemical users, workers and employees are exposed to chemical hazards during the handling. Information provided on the labels and SDS enables users of hazardous chemicals to identify the hazards and take the necessary preventive or protective measures for their safety and health.
Change and Review period	<ul style="list-style-type: none"> • If there is new information that necessitates a revision to SDS and/or labels, the suppliers shall update the SDS and/or the label respectively. • SDS/ Label review period: 5 (five) years 	Consistent with UN Purple Book guidance. To make sure the SDS and or labels will have most up dated info timely and be available for the chemical users.
Training	<p>Basic training requirement and frequencies should be developed for use and understanding of hazard communication tools (i.e., SDS and labelling) at different level.</p> <p>Refer to Good practices above for other tools available.</p>	To ensure the understanding and effective use of the hazard communication tools.

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Items	Recommendation Proposal (with reference to the 2018 workplan)	Justification
Training and capacity building	Develop fundamental GHS training standard (requirement)	To implement GHS at plant level, manufacturers, suppliers and users of chemicals as well as safety and health personnel must be equipped with the necessary knowledge on GHS. In implementing the GHS, companies must ensure that their in-house personnel are trained in GHS
SDS for purchased chemicals (imported)	Local importers have the obligations to ensure compliance of SDS in according with local requirements regulations.	To ensure the up-to-date and correct SDS is available to the chemical users or handlers before use.
SDS distribution	Chemical manufactures /suppliers/ traders have the obligations to provide the accurate SDS to the customers/ end users	To ensure the up-to-date and correct SDS is available to the chemical users or handlers before use.

Appendix B: ASEAN-7 Recommendation on GHS alignment - GHS Classification

Part 1 - Overall Considerations			
Categories	UN Purple Book	ASEAN proposal	Justification / Comments
GHS version adopted	7	7	Justifications are tabulated below for items where deviations from UN Purple Book Rev 7 are made.
List of chemicals with mandatory classification	No	No	Though it may help SME with the substance classification. However, there is added concerns: 1. Additional work on Gov to develop list and its classification. 2. Gov to setup system to periodically review listing and its classification. 3. Gov to setup system to allow industry to 'challenge' classification if they have added data.
Building Block Approach	No	Yes	Typical approach in US/EU and most AP countries.
Regulatory Basis	Rev7, 2017	VWG	Typical approach in US/EU and most AP countries.

Part 2 - Building Blocks				
Physical Hazard Class	Hazard Categories	UN Purple Book	ASEAN	Justification / Comments
Explosives	Div 1.1 - 1.5	√	√	
	Div 1.6	√	√	
	Unstable explosive	√	√	
Flammable Gases	Sub-Category 1A - Flammable gas	√	√	New under Rev7. Adopt if countries adopt Rev7.
	Subcategory 1A - Chemically unstable gas category A/B	√	√	New under Rev7. Adopt if countries adopt Rev7.
	Sub-Category 1A - Pyrophoric gas	√	√	New under Rev7. Adopt if countries adopt Rev7.
	Sub-category 1B	√	√	New under Rev7. Adopt if countries adopt Rev7.
	Cat 2	√	√	
Aerosols	Cat 1	√	√	
	Cat 2	√	√	
	Cat 3	√	√	Align with EU and 3 AP countries (SG, PH, VN). New under Rev 4. Adopt if countries adopt Rev7.

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Physical Hazard Class	Hazard Categories	UN Purple Book	ASEAN proposal	Justification / Comments
Oxidising Gases	Cat 1	√	√	
Gases under pressure	Compressed gas	√	√	
	liquefied gas	√	√	
	refrigerated liquefied gas	√	√	
	dissolved gases	√	√	
Flammable Liquids	Cat 1, 2, 3	√	√	
	Cat 4	√	X	Per UN Orange Book, Cat 4 are not considered as DG.
Flammable Solids	Cat 1	√	√	
	Cat 2	√	√	
Self reactive substances and mixtures	Type A, B, C, D, E, F	√	√	
	Type G	√	√	
Pyrophoric liquids	Cat 1	√	√	
Pyrophoric solids	Cat 1	√	√	
Self heating substances and mixtures	Cat 1	√	√	
	Cat 2	√	√	
Substances and mixtures which in contact with water emits flammable gases	Cat 1, 2	√	√	
	Cat 3	√	√	
Oxidising Liquids	Cat 1, 2	√	√	
	Cat 3	√	√	
Oxidising Solids	Cat 1, 2	√	√	
	Cat 3	√	√	
Organic Peroxides	Type A, B, C, D, E, F	√	√	
	Type G	√	√	
Corrosive to metals	Cat 1	√	√	
Desensitised Explosives	Cat 1, 2, 3	√	√	New under Rev6. Adopt if countries adopt Rev7.
	Cat 4	√	√	New under Rev6. Adopt if countries adopt Rev7.

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Health Hazard Class	Hazard Categories	UN Purple Book	ASEAN proposal	Justification / Comments
Acute Toxicity (oral, dermal, inhalation)	Cat 1-3	√	√	
	Cat 4	√	√	
	Cat 5	√	X	Test Data may not be readily available. Building block not adopted in US/EU and most AP countries
Skin corrosive or irritant substance	Cat 1, 2	√	√	
	Allows for sub category Cat1A/B/C	√	√	Where data are available.
	Cat 3 (mild Irritant)	√	X	Test Data may not be readily available. Building block not adopted in US/EU and most AP Countries
Serious eye damage/eye irritation	Cat 1, 2/2A	√	√	
	Cat 2B	√	X	Not adopted in EU and most AP countries (MY/PH/SG), except TH/IN/Myanmar
Sensitizer	Respiratory Cat 1	√	√	
	Skin Cat 1	√	√	
	Allows for sub category Cat1A/B	√	√	
Carcinogenic substance	Cat 1 (1A/1B)	√	√	
	Cat 2	√	√	
Germ cell mutagenicity	Cat 1 (1A/1B)	√	√	
	Cat 2	√	√	
Toxic to reproduction	Cat 1 (1A/1B)	√	√	
	Cat 2	√	√	
	Effects on or via lactation	√	√	
STOT (one time exposure)	Cat 1, 2	√	√	
	Cat 3	√	√	
STOT (repeated exposure)	Cat 1	√	√	
	Cat 2	√	√	
Aspiration Hazard	Cat 1	√	√	
	Cat 2	√	X	Not adopted in EU and most AP countries

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Environmental Hazard Class	Hazard Categories	UN Purple Book	ASEAN proposal	Justification / Comments
Acute hazard to the aquatic environment	Cat 1	√	√	
	Cat 2, 3	√	X	Classification not required for DG; typically, not adopted in US/EU and most AP countries
Chronic hazard to the aquatic environment	Cat 1,2	√	√	
	Cat 3, 4	√	X	Classification not required for DG. Not adopted in US/SG/PH. Adopted in EU/MY/IN/TH/VN
Hazard to Ozone Layer	Cat 1 (rev3)	√	√	

Part 3 - Mixture Thresholds

A) Mixture Classification Thresholds for Hazard Classes where GHS Purple book leave decisions to Competent Authorities

Ingredient Classified as:	Cut-off/concentration limits	UN Purple Book Mixture classified as	ASEAN Mixture classified as	Justification / Comments
Respiratory Sensitiser Cat 1	≥0.1% - <1% (solid, liquid)	Competent authorities to decide	Not classified.	Adopt higher concentration limits. Align with EU and most AP Countries.
	≥ 1% (solid, liquid)	Cat 1	Cat 1	
	≥0.1% - <0.2% (gas)	Competent authorities to decide	Not classified.	Adopt higher concentration limits. Align with EU and most AP Countries
	≥ 0.2% (gas)	Cat 1	Cat 1	
Skin Sensitiser Cat 1	≥ 0.1% - <1%	Competent authorities to decide	Not classified.	Adopt higher concentration limits. Align with EU and most AP Countries.
	≥1%	Cat 1	Cat 1	
Carcinogenic substance Cat 2	≥ 0.1% - <1%	Competent authorities to decide	Not classified.	Adopt higher concentration limits. Align with EU and most AP Countries
	≥1%	Cat 2	Cat 2	
Toxic to reproduction Cat 1A/1B	≥ 0.1% - <0.3%	Competent authorities to decide	Not classified.	Adopt higher concentration limits. Align with EU and most AP Countries
	≥0.3%	Cat 1A/Cat 1B	Cat 1A/1B	
Toxic to reproduction Cat 2	≥ 0.1% - <3%	Competent authorities to decide	Not classified.	Adopt higher concentration limits. Align with EU and most AP Countries
	≥3%	Cat 2	Cat 2	

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Ingredient Classified as:	Cut-off/concentration limits	UN Purple Book Mixture classified as	ASEAN Mixture classified as	Justification / Comments
Effects on or via lactation	≥ 0.1% - <0.3%	Competent authorities to decide	Not classified.	Adopt higher concentration limits. Align with EU and most AP Countries
	≥0.3%	Effects on or via lactation	Effects on or via lactation	
STOT (single) - Cat 1	≥ 1% - <10%	Competent authorities to decide	Cat 2	Align with EU and most AP Countries
	≥10%	Cat 1	Cat 1	
STOT (single) - Cat 2	≥ 1% - <10%	Competent authorities to decide	Not classified.	Adopt higher concentration limits. Align with EU and most AP Countries
	≥10%	Cat 2	Cat 2	
STOT (single) - Cat 3	≥20%	Cat 3	Cat 3	Suggested range. Expert justification to be exercised.
STOT (repeated) - Cat 1	≥ 1% - <10%	Competent authorities to decide	Cat 2	Align with EU and most AP Countries
	≥10%	Cat 1	Cat 1	
STOT (repeated) - Cat 2	≥ 1% - <10%	Competent authorities to decide	Not classified.	Adopt higher concentration limits. Align with EU and most AP Countries
	≥10%	Cat 2	Cat 2	

Part 3 - Mixture Thresholds

B) Mixture Classification Thresholds (mandatory per GHS Purple Book) - Adopt per GHS Purple Book for these hazard classes below - Listed FOR REFERENCE ONLY

Ingredient Classified as:	Cut-off/concentration limits	UN Purple Book Mixture classified as	ASEAN Mixture classified as	Justification / Comments
Respiratory Sensitiser Cat 1A	≥0.1% (solid, liquid, gas)	Cat 1A	Cat 1A	
Respiratory Sensitiser Cat 1B	≥0.1% - <1% (solid, liquid)	Not classified	Not classified.	
	≥1% (solid/liquid)	Cat 1B	Cat 1B	
	≥0.2% (gas)	Cat 1B	Cat 1B	
Skin Sensitiser Cat 1A	≥0.1%	Cat 1A	Cat 1A	
Skin Sensitiser Cat 1B	0.1-1%	Not classified	Not classified	
	≥1%	Cat 1B	Cat 1B	

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Ingredient Classified as:	Cut-off/concentration limits	UN Purple Book Mixture classified as	ASEAN Mixture classified as	Justification / Comments
Carcinogenic substance Cat 1A/Cat 1B	≥ 0.1%	Cat 1A/Cat 1B	Cat 1A/Cat 1B	
Germ cell mutagenicity Cat 1A/Cat 1B	≥ 0.1%	Cat 1A	Cat 1A	
Germ cell mutagenicity Cat 2	≥ 1%	Cat 2	Cat 2	
Aspiration Hazard Cat 1	≥ 10%	Cat 1 (if KV@40C ≤20.5mm ² /s)	Cat 1 (if KV@40C ≤20.5mm ² /s)	
Aspiration Hazard Cat 2	≥ 10%	Cat 2 (if KV@40C ≤14mm ² /s)	Cat 2 (if KV@40C ≤14mm ² /s)	
Note: Acute Toxicity, Skin Corrosive/Irritant, Serious Eye Damage/Eye Irritant and Acute/Chronic Aquatic Toxicity Classification are derived based on calculation methods (per GHS Purple Book) - No tabulation is done				

Appendix C: ASEAN-7 Recommendation on GHS alignment - GHS Labeling

Part 1		
Definition	Recommendation	Justification
Hazardous chemical(s)	Substance(s) or mixture(s) fulfilling the criteria relating to physical hazards, health hazards or environmental hazards, laid down in GHS requirements and shall be classified according to the respective hazard classification and communicated with the hazard communication elements by type of hazard.	<ul style="list-style-type: none"> Refer to Malaysia ICOP To provide clear and concise definition, not to be confused with other categories, e.g., dangerous goods for transportation.
GHS label	an appropriate group of written, printed or graphic information elements concerning a hazardous chemical, selected as relevant to GHS requirements, that is affixed, printed on, or attached to the immediate container or the outside packaging of a hazardous chemical	<ul style="list-style-type: none"> To be consistent with UN GHS definition of label. The purpose is to address the need to have the label to include GHS info only. Drew the idea from UN GHS ver.6 / ver. 7 definition of label
Label element(s)	type(s) of information that have been harmonized for use in GHS label, e.g., pictograms, signal word etc.	To be consistent with UN GHS definition of label (with reference to UN GHS ver.6 / ver.7)
Container / packaging	Refer to CLP - Article 2 (36): ‘packaging’ means one or more receptacles and any other components or materials necessary for the receptacles to perform their containment and other safety functions; “packaging / containers” can also be further defined as “Any bag, barrel, bottle, box, can, cylinder, drum, intermediate bulk container (IBC) or the line that contain a hazardous chemical. Pipe or Piping systems, and engines, fuel tanks and other operating systems in a vehicle, tank containers, freight containers, carrying tank of a road tanker are not considered to be containers; should be considered as containers if they are used for storage”	It's to provide clearer reference to users. The identified containers (bag, barrel, bottle, box, can, cylinder, drum, intermediate bulk container (IBC) or the line) are used routinely for storage purpose while others (pipe or piping systems, and engines, fuel tanks and other operating systems in a vehicle, tank containers, freight containers, carrying tank of a road tanker) are regularly used for material transfer.
Small container / packaging	any container or packaging which is 125ml or below.	To be consistent with UN purple book guidance and CLP regulations

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Part 2		
GHS Label content	Recommendation	Justification
min. 6 labels elements	A GHS label shall contains 7. Product Identifier 8. Pictogram 9. Signal word 10. Hazard statement 11. Precautinoary statement 12. Suppler information all others information may be included as supplementary information	A label is to provide users with adequate information that they could easily understand on the hazard of the materials so that they could take necessary precautionary actions for safe use, handling and disposal.
Product Identifier	A product identifier used on the label shall match the product identifier listed on the SDS	This is important to ensure that the user could refer to the correct SDS for additional information
Pictogram	1. A pictogram consists of a symbol and a border 2. Pictogram shall have a black symbol on a white background with a red border. 3. Black border is acceptable if the chemical is for local distribution and not for export. 4. The border shall be in diamond shape with the sides tilted at 45° to the horizontal. 5. Only include pictogram(s) due to classification results of the chemical and rule of precedence. 6. Pictogram(s) on the GHS label should match with those listed on the SDS. 7. Pictogram(s) shall be clear and visible. 8. It should be of appropriate size with respective to the label size.	Consistent with UN purple book guidance
Signal word	Signal word shall be clear and visible. Only one signal word (Danger or Warning - when applicable) shall appear on the label	Consistent with UN purple book guidance
Hazard statement	All hazard statements shall be included. Inclusion of Hazard statement code (H code) together with hazard statement is optional. H-Code shall not replace the hazardous statements	Consistent with UN purple book guidance.

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GHS Label content	Recommendation	Justification
Precautionary statement	Precautionary statements should be clear, visible, readable and align with those listed on SDS if adequate space is available on the label. Repetitive or reductant statements could be omitted, provided that it does not lower the level of protection in relation to the hazards. Inclusion of Precautionary statement code (P-Code) together with the respective precautionary statement is optional. P-Code shall not replace the precautionary statements	Additional resource and expertise required for extracting suitable P statements from SDS to labels; important and crucial statements could be innocently omitted. This renders the effort of providing adequate info to users for safe use, handling, and disposal.
Supplier information	<ol style="list-style-type: none"> 1. It shall contain local company name, address, phone number of the local manufacturer, importer, supplier or local affiliated company of principal company. 2. 24/7 emergency response number should also be provided. If not, stating the operation hour 3. It could be provided in a separate label if the label content meets the local requirements or 	This is important so that the users can reach out for immediate assistance. A local number is useful as assistance could be communicated with local language and not every user has access to international calling.
Supplementary information	It is optional & shall be excluded if the info is presented in a separate label. However, its use shall be limited to the following circumstances: <ol style="list-style-type: none"> a) It provides further detail and does not contradict or cast doubt on the validity of the hazard information; or b) It provides information about hazards not yet incorporated into GHS 	Consistent with UN purple book guidance.

Part 3

Label requirements	Recommendation	Justification
	GHS labels are required for all hazardous chemicals	Consistent with UN purple book guidance.
Label size	<p>< 3L: min 52 x 74 mm (if practicable)</p> <p>3- 50L: min 74 x 105 mm</p> <p>50 - 500L: min 105 x 148 mm</p> <p>> 500L: min 148 x 210 mm</p>	To have more aligned approach so that re-labelling is not required when transfer materials from country to country (assuming all other labeling elements meeting the requirements).
Label placement	For hazardous chemicals for <u>export only</u> , GHS label meeting the destination GHS requirements could be applied	As this is not for local distribution, it makes sense to label the material as per destination requirements

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Label requirements	Recommendation	Justification
Label placement	GHS labels meeting requirements of other countries are acceptable, provided if the country requirements meet UN GHS version 3 or above, and the labels are in English or local language	GHS label is a form of hazard communication with consistent label elements (e.g., Pictograms). With adequate and proper training, users should be able to take necessary action.
	For imported hazardous chemicals with GHS labels in English affixed and meeting requirements of exporting / source countries <ul style="list-style-type: none"> • a second GHS label in local language of direct translation from the exporting / source countries can be applied at the first workplace after custom clearance, before 1st distribution -must indicate the reference GHS system e.g., CLP • GHS labels meeting local requirements can be applied at the first workplace after custom clearance, before 1st distribution 	This is to address the potential challenges faced with <ul style="list-style-type: none"> • the exporter, who may not have the right capability to provide GHS info in local language, which may defeat the purpose of providing correct hazard info to local users. • the local importer, who may not have the capabilities to classify and label the materials in accordance to the local GHS requirements. Doing a direct translation with reference to a recognized GHS system may be an easier task to be fulfilled.
	Accept area labeling meeting local requirements for hazard chemicals in transit for re-export, stored in bonded warehouse	As the materials are meant for re-export, not for local distribution, placing GHS label meeting local requirements may incur additional HSE risks. However, to manage the risk during storage in bonded warehouse, area labeling meeting local requirements are recommended.
	The label shall be affixed firmly on one or more surfaces of the container.	The packaging may be stacked in a manner that the labels are not visible to users or incur additional risk when users have to move the packaging to have a look at the packaging.
	In the event that the label cannot be affixed firmly onto the surface(s) of the container, it can tag or presented in fold out or cut out labels	This is to mitigate the situations where the packaging is in odd shape, too small the size, or made of materials where labels could not be affixed firmly on the surfaces
Labeling for small container	For small container/ packaging, the label shall contain, at minimum, <ul style="list-style-type: none"> e) Product Identifier f) Pictograms g) signal word h) phrase of "Read SDS before use" 	In consideration of the space limitation and readability, only the few elements are chosen, but emphasize that the users should refer to SDS for details.
	If the small container comes with an outer packaging, a full GHS label should be attached on the outer packaging/secondary packaging	Consistent with UN purple book guidance.

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			<ul style="list-style-type: none"> ii. Enable sufficient public consultation session to allow active exchange/dialogue session for questions and concerns from industries iii. Consider to include the feedbacks/recommendations from association and industry in the implementation plan 	<input type="checkbox"/>	<input type="checkbox"/>	
4	SDS and Labelling Requirements	Authority	<ul style="list-style-type: none"> i. Acceptance of label with multiple languages (<i>specific to country intended for the implementation</i>) ii. Acceptance of additional label elements which are mandatory in other ASEAN countries iii. Allow GHS label with equal or more stringent version or allow old and new version of SDS and labels iv. Allow differences in translation for precautionary statements v. Allow label to follow the requirements of transit bound country 	<input type="checkbox"/>	<input type="checkbox"/>	
5	Classification of Hazardous Chemicals	Authority, Industry	<ul style="list-style-type: none"> i. Conduct impact assessment on the different GHS version under consideration for necessary preparation ii. Allow or execute self-classification of the hazardous chemicals with additional effort from authority to develop classification list as reference iii. Conduct survey to collect information from industry on understanding of GHS version and GHS classification tool, for developing and adoption of practical approach. iv. Develop public accessible classification tool to support industry, especially SME 	<input type="checkbox"/>	<input type="checkbox"/>	

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6	Enforcement of GHS Regulations by Different Competent Authorities	Authority	i. Individual regulations enforced by each competent authority or a centralized regulation ii. Establish industrial standards and reference by regulations iii. Examine the data accuracy by GHS validation on SDS and labels.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
7	GHS Classification Database for Single Substances	Authority	i. Establish classification database for ASEAN member states based on mutually agreed GHS version to achieve harmonized classification and implementation	<input type="checkbox"/>	<input type="checkbox"/>	
8	Acceptance of GHS Version Among ASEAN Member States	Authority	i. Establish ministerial agreement to accept implemented GHS version among ASEAN member states for trade facilitation within the region.	<input type="checkbox"/>	<input type="checkbox"/>	

Appendix E: GHS Mutual Acceptance Principles

No.	GHS Mutual Acceptance/ Recognition Options	Principles and Conditions	Remark
1	Accepting later revisions of the GHS than the implemented	• Shared clear and accurate details of what is accepted for later GHS revisions	
		• Shared clear and accurate details of the restrictions/ limitations about accepting later GHS revisions	
		• Clear on what is acceptable and any other restrictions / limitations for the mutual acceptable arrangement	
		• All revisions of GHS will have to be reviewed and understood by regulators and practitioners, including the newer revisions every 2 (two) years	

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		<ul style="list-style-type: none"> • GHS guidance/ rules/ regulations and timeline in place 	
		<ul style="list-style-type: none"> • Sufficient resources, expertise and infrastructure 	
		<ul style="list-style-type: none"> • Good and in advance communication 	
		<ul style="list-style-type: none"> • Reciprocal Acceptance 	
2	Accepting later and older revisions of the GHS than the implemented	<ul style="list-style-type: none"> • Same as above (no1) 	
		<ul style="list-style-type: none"> • Provided the level of protection is same or stronger with respect to the chemical 	
3	Accepting hazard communication documents (safety data sheets and labels) based on more than one revision version of the UN GHS Purple Book for classification.	<ul style="list-style-type: none"> • Same as above (no 1) 	
		<ul style="list-style-type: none"> • If a country implements the 3rd revision of GHS, it could also accept the 4th through the 8th revisions of GHS, provided that the level of protection was the same or stronger with respect to the chemical 	
4	Accepting classifications based on building blocks that have not been adopted by the country	<ul style="list-style-type: none"> • Same as above (no 1) 	
		<ul style="list-style-type: none"> • All the adopted building blocks are included in the classification. 	