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Brunei – Ministry of Primary Resources and Tourism

Cambodia – Ministry of Industry, Science, Technology & Innovation (MISTI)

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.

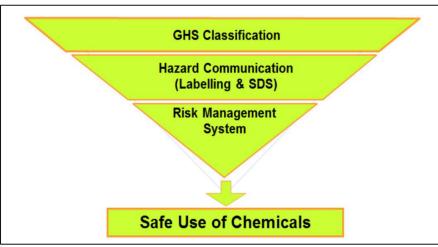
Enhanced regulatory cooperation has the potential to significantly reduce costs for governments and industries alike, while helping economies achieve their regulatory mandate of protecting human health, safety and the environment, without erecting unnecessary barriers to trade.

Currently, many ASEAN member states are in the process of implementing or considering the adoption of the updated version of Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Developed by the United Nations (UN), the GHS provides standardized provisions for hazard communication through harmonized labeling and safety data sheets (SDS). Its objectives include improving health and safety for workers and chemical users, ensuring environmental protection, facilitating trade, and reducing 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 the Classification and Labelling of Chemicals (GHS) in 2004. It undergoes a continuous update process led by the UN Sub-Committee of Experts on the GHS (UN SCE GHS), with a new version published at two-year intervals. There are several variances in how and when the 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 Platform (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 Mutual Acceptance basis for various GHS adoption version in various economies. 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) GHS Implementation Alignment

ASEAN-7+

3.1 Goal & Objectives

The goal and objectives of GHS Implementation alignment are as follow:

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 mutual acceptance recommendations on GHS and its principles:
 - Utilize GHS Version Update/New Implementation Checklist
 - Implement elements that promote wider acceptance of the GHS regulation in the region.
 - National Implementation Strategy that considers mutual acceptance and alignment with ASEAN-7+.

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. A sufficient transition period with a 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, including the US, EU and several countries in Asia Pacific region. Consistent with the principles laid out in the GHS, ASEAN-7+ suggests dropping some of the lower degree hazard classifications, due to the limited data availability and to ensure better alignment with more established systems. If relevant data becomes available, industries are encouraged to provide such information. The list of optional GHS building blocks not adopted in ASEAN-7+ is summarized in Table A below. Appendix B (Classification Recommendations) provides 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). Such a 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 business interest in the marketplace.
- (h) For GHS SDSs, ASEAN-7+ recommends the adoption of SDS format and disclosure limits of hazardous ingredients. 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 limit. 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. Precautinoary statement
- 6. Suppler information all others information may be included as supplementary information

- (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"
- (I) 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 the ASEAN-7+ recommendations on GHS and work towards a unified approach that serves as a foundation for all ASEAN nations. An aligned GHS approach, through enhanced regulatory cooperation among ASEAN member states, will lead to a more efficient and effective regulatory environment. This collaborative approach will enable economies to achieve their regulatory mandates of protecting human health, safety, and the environment, while avoiding unnecessary barriers to trade.

With the recent GHS development and challenges, there have been discussions 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.

- o Harmonized approach to GHS implementation
- o Improving acceptance of other GHS implementation in other countries

As new versions of GHS are released, this document will be periodically updated to ensure adaptability and promote broader acceptance across the region.

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 GHS development/ improvement initiatives to avoid overlapped GHS requirements or registrations by different agencies. E.g., Singapore – Ministry of Manpower (MOM), Cambodia - Ministry of Industry and Handicraft (MIH) and Malaysia – Department of Occupational Safety and Health (DOSH).
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 resources and expertise. Enrich the outcomes as result of different opinions and competencies. 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
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 guidelines 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		
 Future - Version of GHS adopted Adaptation to the next GHS version and phase of implementation 	Ver 7+	 Ver 7 is the suitable version which has no significant differences compare to ver 6 and upper versions. For reference: A new hazard class for desensitized explosives (Solid/Liquid) (Category 1-4) & a new hazard category for pyrophoric gases (Category 1A) 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) Revised criteria for categorisation of flammable gases within Category 1 Miscellaneous amendments intended to clarify the definitions of some health hazard classes Additional information to be included in the Safety Data Sheets (Section 9) 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 A new example in Annex 7 addressing labelling of small packaging with foldout labels. Revised and further rationalized precautionary statements in Annex 3. 		
Scope of GHS Labelling - Definition of containers and 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 references 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.		

Part 2 – SDS			
Items	Recommendation Proposal (with reference to the 2018 and 2025 workplan)	Justification	
SDS disclosure limit specified in	Yes, specific SDS cut-off limits exist	Consistent with UN Purple Book guidance.	
legislation 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	 The general principles for the disclosure of CBI in SDSs and labels: 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	Justification
	and 2025 workplan)	
Implementation	Recommended Requirements	
Good practices/guidelines	Good Practices:	To encourage good practices and knowledge sharing among different industries
	Guidebook/ Technical Guideline/ GHS Standard on	and enhance the effectiveness of GHS implementation by all sectors/
	the GHS classification and Labelling of Chemicals	stakeholders.
	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	
Implementation -timeline	Divided in 2 phases with sufficient grace period:	GHS implementation for mixtures will require more time (longer grace period)
	• phase 1. Substances	compare to substance, due to the complexity of classification and number of
	• phase 2. Mixtures	impacted products
	May add additional stages as needed according to	
	country existing reg's	
Implementation-scope	Industrial chemicals at the Workplace as the 1st priority	Industrial chemicals at the Workplace as the 1st priority to implement. In the
	to implement.	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	If there is new information that necessitates a	Consistent with UN Purple Book guidance. To make sure the SDS and or labels
	revision to SDS and/or labels, the suppliers shall	will have the most updated info timely and be available for the chemical users.
	update the SDS and/or the label respectively.	
	 SDS/ Label review period: 5 (five) years 	
Training	Basic training requirements and frequencies should be	To ensure understanding and effective use of the hazard communication tools.
	developed for use and understanding of hazard	
	communication tools (i.e., SDS and labelling) at different	
	level.	
	Refer to Good practices above for other tools available.	

Items	Recommendation Proposal (with reference to the	Justification
	2018 and 2025 workplan)	
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 accordance 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.
SDS Updating	SDSs should be reviewed regularly, at least annually, to ensure they reflect the most current information about chemical hazards and safety measures.	Follow the specific regulatory guidelines of each jurisdiction implementing GHS.

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: Additional work on Gov to develop list and its classification. Gov to setup system to periodically review listing and its classification. 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	٧	٧	
	Div 1.6	٧	٧	
	Unstable explosive	٧	٧	
Flammable Gases	Sub-Category 1A - Flammable gas	٧	٧	New under Rev7. Adopt if countries adopt Rev7.
	Subcategory 1A - Chemically unstable gas category A/B	٧	٧	New under Rev7. Adopt if countries adopt Rev7.
	Sub-Category 1A - Pyrophoric gas	٧	٧	New under Rev7. Adopt if countries adopt Rev7.
	Sub-category 1B	٧	٧	New under Rev7. Adopt if countries adopt Rev7.
	Cat 2	٧	٧	
Aerosols	Cat 1	٧	٧	
	Cat 2	٧	٧	
	Cat 3	٧	٧	Align with EU and 3 AP countries (SG, PH, VN). New under Rev 4. Adopt if countries adopt Rev7.

Physical Hazard Class	Hazard Categories	UN Purple Book	ASEAN proposal	Justification / Comments
Oxidising Gases	Cat 1	V	√	
Gases under pressure	Compressed gas	V	٧	
	liquefied gas	V	٧	
	refrigerated liquefied gas	V	٧	
	dissolved gases	٧	٧	
Flammable Liquids	Cat 1, 2, 3	٧	٧	
	Cat 4	٧	Х	Per UN Orange Book, Cat 4 is not considered as DG.
Flammable Solids	Cat 1	٧	٧	
	Cat 2	٧	٧	
Self reactive substances and	Type A, B, C, D, E, F	٧	٧	
mixtures	Type G	٧	٧	
Pyrophoric liquids	Cat 1	٧	٧	
Pyrophoric solids	Cat 1	٧	٧	
Self heating substances and	Cat 1	٧	٧	
mixtures	Cat 2	٧	٧	
Substances and mixtures	Cat 1, 2	٧	٧	
which in contact with water emits flammable gases	Cat 3	٧	٧	
Oxiding Liquids	Cat 1, 2	٧	٧	
	Cat 3	٧	٧	
Oxidising Solids	Cat 1, 2	٧	٧	
	Cat 3	٧	٧	
Organic Peroxides	Type A, B, C, D, E, F	٧	٧	
	Type G	٧	٧	
Corrosive to metals	Cat 1	٧	٧	
Desensitised Explosives	Cat 1, 2, 3	٧	٧	New under Rev6. Adopt if countries adopt Rev7.
	Cat 4	٧	٧	New under Rev6. Adopt if countries adopt Rev7.

Health Hazard Class	Hazard Categories	UN Purple Book	ASEAN	Justification / Comments
			proposal	
Acute Toxicity (oral, dermal,	Cat 1-3	٧	٧	
inhalation)	Cat 4	٧	٧	
	Cat 5	٧	X	Test Data may not be readily available. Building block not adopted in US/EU and most AP countries
Skin corrosive or irritant	Cat 1, 2	٧	٧	
substance	Allows for sub category Cat1A/B/C	٧	٧	Where data are available.
	Cat 3 (mild Irritant)	٧	Х	Test Data may not be readily available. Building block not adopted in US/EU and most AP Countries
Serious eye damage/eye	Cat 1, 2/2A	٧	٧	
irritation	Cat 2B	٧	Х	Not adopted in EU and most AP countries (MY/PH/SG), except TH/IN/Myanmar
Sensitizer	Respiratory Cat 1	٧	٧	
	Skin Cat 1	√	٧	
	Allows for sub category Cat1A/B	٧	٧	
Carcinogenic substance	Cat 1 (1A/1B)	√	٧	
	Cat 2	٧	٧	
Germ cell mutagenicity	Cat 1 (1A/1B)	٧	٧	
	Cat 2	٧	٧	
Toxic to reproduction	Cat 1 (1A/1B)	٧	٧	
	Cat 2	٧	٧	
	Effects on or via lactation	٧	٧	
STOT (one time exposure)	Cat 1, 2	٧	٧	
, , , , , , , , , , , , , , , , , , , ,	Cat 3	٧	٧	
STOT (repeated exposure)	Cat 1	٧	٧	
	Cat 2	٧	٧	
Aspiration Hazard	Cat 1	٧	٧	
	Cat 2	V	Х	Not adopted in EU and most AP countries

Environmental Hazard Class	Hazard Categories	UN Purple Book	ASEAN	Justification / Comments
			proposal	
Acute hazard to the aquatic	Cat 1	٧	٧	
environment	Cat 2, 3	٧	X	Classification not required for DG; typically, not adopted in US/EU and
				most AP countries
Chronic hazard to the aquatic	Cat 1,2	V	٧	
environment	Cat 3, 4	٧	Х	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)	٧	٧	

Part 3 - Mixture Thresholds									
A) Mixture Classification Tl	nresholds for Hazard Classe	s where GHS Purple boo	k leave decisions to Com	petent Authorities					
Ingredient Classified as:	Cut-off/concentration	UN Purple Book	ASEAN	Justification / Comments					
	limits	Mixture classified as	Mixture classified as						
Respiratory Sensitiser Cat 1	≥0.1% - <1% (solid,	Competent	Not classified.	Adopt higher concentration limits. Align with EU and most AP					
	liquid)	authorities to decide		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						

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

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	UN Purple Book	ASEAN	Justification / Comments
	limits	Mixture classified as	Mixture classified as	
Respiratory Sensitiser Cat	≥0.1% (solid, liquid, gas)	Cat 1A	Cat 1A	
1A				
Respiratory Sensitiser Cat	≥0.1% - <1% (solid,	Not classified	Not classified.	
1B	liquid)			
	≥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	

Ingredient Classified as:	Cut-off/concentration	UN Purple Book	ASEAN	Justification / Comments
	limits	Mixture classified as	Mixture classified as	
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 <=20.5mm2/s)	Cat 1 (if KV@40C <=20.5mm2/s)	
Aspiration Hazard Cat 2	≥ 10%	Cat 2 (if KV@40C <=14mm2/s)	Cat 2 (if KV@40C <=14mm2/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.	 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	 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

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	 A pictogram consists of a symbol and a border Pictogram shall have a black symbol on a white background with a red border. Black border is acceptable if the chemical is for local distribution and not for export. The border shall be in diamond shape with the sides tilted at 45° to the horizontal. Only include pictogram(s) due to classification results of the chemical and rule of precedence. Pictogram(s) on the GHS label should match with those listed on the SDS. Pictogram(s) shall be clear and visible. 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.							

GHS Label	Recommendation	Justification
content		
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	 It shall contain local company name, address, phone number of the local manufacturer, importer, supplier or local affiliated company of principal company. 24/7 emergency response number should also be provided. If not, stating the operation hour 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: 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	< 3L: min 52 x 74 mm (if practicable) 3- 50L: min 74 x 105 mm 50 - 500L: min 105 x 148 mm > 500L: min 148 x 210 mm	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

Label	Recommendation	Justification
requirements		
Label placement	GHS labels meeting requirements of other countries are acceptable, provided if the country requirements meet UN GHS version 7 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 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 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 reexport, 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, 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.

<u>Appendix D: GHS Version Update/New Implementation Checklist – Reference</u>

No.	Best Practices	Responsible	Approach/Measures		cation	Remark
		Party		Yes	No	
1	Transitional Period for GHS Revision	Authority	 Establish appropriate timeframes and milestone for end-to-end consideration and implementation. 			
			ii. Mutual agreement among different competent authorities for the implementation plan and the legal enforcement during transition period			
			iii. Implementation guidance document made available for regulators and industries			
			iv. Sufficient implementation time with phased approach (i.e., phase 1 for substance and phase 2 for mixtures)			
			v. Acceptance on the existing version during implementation phase (specific to the country intended to implement)			
			vi. Conduct survey/assessment to find out the potential risks and impacts to the industries and related stakeholder. Common transition period for the adoption of latest or different GHS version is at least one year. And more time should be planned for first time adoption of GHS.			
			vii. Transition/phase-in time for any incoming shipment / goods into the country and those on the shelf for sales.			
			viii. Standby a list of related regulations and its authority for reference			
			ix. Consider adoption best practices from other countries			

2	Capacity Building	Authority, Industry, Associations,	i.	Good understanding and interpretation on the requirements for existing GHS version and new GHS version		
		chemical users	ii.	Conduct dialogue session between authority and industry to understand the requirements and concerns (before and after the release of draft new requirement)		
			iii.	Training to be held for authorities and industries prior to starting implementation and to be conducted by relevant competent authority personnel or assigned competent trainer		
			iv.	Identify the existing training center to enhance the capacity building		
			V.	Adequate trainings for end users on GHS especially for SME (Small Medium Enterprise)		
			vi.	Technical guidance		
			vii.	Conduct business impact assessment on what need to be changed (SDS, labelling and re-labelling, procedure), resources (competent personnel, equipment/system, cost) and time required for full transition or implementation (Project management)		
			viii.	Identify case scenario for difference industries as a reference and self-guidance during implementation		
3	Public Consultation and Stakeholder Engagement	Authority, Association	i.	Adequate stakeholder engagement to ensure that association and industry have clear understanding in term of the implementation plan and implementation approach		

			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		
4	SDS and Labelling Requirements	Authority	i.	Acceptance of label with multiple languages (specific to country intended for the implementation)		
			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		
5	Classification of Hazardous Chemicals	Authority, Industry	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		

6	Enforcement of GHS Regulations by Different Competent Authorities	Authority	i.	Individual regulations enforced by each competent authority or a centralized regulation		
	competent Additionales		ii.	Establish industrial standards and reference by regulations		
			iii.	Examine the data accuracy by GHS validation on SDS and labels.		
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		
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.		

Appendix E: GHS Mutual Acceptance Principles

No.	GHS Mutual Acceptance/ Recognition Options	Principles and Conditions	Remark
1	Define minimum requirements for GHS implementation	Clearly identify mandatory building blocks to use (including hazard classes, hazard categories)	
		Identify cut-off values to be used for each relevant hazard classes	
		Identify mixture classification thresholds for each relevant hazard classes	
		Define hazard communication minimum requirements (for SDS and labelling)	
2		Shared clear and accurate details of what is accepted for later GHS revisions	

	Accepting later revisions of the GHS than the implemented	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	
		GHS guidance/ rules/ regulations and timeline in place	
		Sufficient resources, expertise and infrastructure	
		Good and in advance communication	
		Reciprocal Acceptance	
3	Accepting later and older revisions of the GHS than the implemented	Same as above (no1)	
		Provided the level of protection is same or stronger with respect to the chemical	
4	Accepting hazard communication documents (safety data sheets and labels) based on more than one revision version of the UN GHS Purple Book for classification.	Same as above (no 1)	
		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	
5	Accepting classifications based on building blocks that have not been adopted by the country	Same as above (no 1)	
		All the adopted building blocks are included in the classification.	
6	Engaging in activities around GHS implementation and convergence regionally and/or globally	Consider engaging in activities about GHS implementation (e.g., ARCP, APEC, UNSCEGHS) to learn more about key trading partners, maintain and promote convergence and alignment in best practices.	

ASEAN Guidance Document on Globally Harmonised System (GHS) Implementation Alignment						
2010						