

Gensuite® Power Audit Tool

**Chemicals Management (Thailand) / Print Format Checklist**

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**Instructions:**

- The print format checklist below provides an integrated list of questions with the audit guidance available on each question, where applicable.
- Print this Webpage to help conduct the field verification requirements of your audit.** Record your answers, evaluation notes and audit findings in the spaces provided. **Input your findings** in the on-line Power checklist page following your field audit!
- This checklist contains **24 questions** and reflects underlying laws/regulations/standards as of **June 2011**.

Tip: Select 'Landscape' Orientation (under Print Properties) when printing this page!

Organization:		Site:	
Dept		Site Detail:	
Audit Type:		Audit date(s):	
Auditor(s):			

Findings recorded in on-line Power audit checklist on/by:	
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[1.0 New Chemicals Risk Assessment](#) [2.0 Chemical Packaging](#) [3.0 Cadmium](#) [4.0 Material Safety Data Sheets](#) [5.0 Ozone Depleting Substances](#)

Question	Guide Note	Answer	Evaluation Notes/Findings
1.0 New Chemicals Risk Assessment Top 1.1 If the facility produces, imports, exports, or possesses any Type 2 hazardous substance, it has registered Type 2 hazardous substance and notified the DIW of its production, importation, exportation or possessions of such substance using the form Vor.Or./Or.Kor.5. (See Guide Note)	<p>Regulatory Citations: -Hazardous Substances Act of 29 March B.E. 2535 (1992), section 22 -Notification B.E. 2546 (2003) under the Hazardous Substances Act B.E. 2535 (1992) regarding List of Hazardous Substances, clause 3 -Notification No. 2 of the Ministry of Industry of 8 May 2000 (B.E. 2543) issued under the Hazardous Substances Act 1992 on the Inventory of Hazardous Substances -Notification of Ministry of Industry regarding List of Hazardous Substances (No.3) B.E. 2548 -Notification of Ministry of Industry Regarding List of Hazardous Substances (No. 5) B.E. 2549 -Notification of Ministry of Industry regarding List of Hazardous Substances (No. 6) B.E. 2552 -Notification of Ministry of Industry Regarding List of Hazardous Substances (No. 3) B.E. 2543 -Notification of Minister of Industry regarding List of Hazardous Substances (No. 2) B.E. 2547 -Notification of Ministry of Industry regarding the List of Hazardous Substances (No. 4) B.E. 2544 -Notification of Ministry of Industry regarding List of Hazardous Substances (No. 4) B.E. 2549 -Notification of Department of Industrial Works on the Procedures on Notifying of Possession of Type 2 Hazardous Substances and Licensing Procedures B.E. 2551 (2008), clause 2 and 4 -Notification of Ministry of Industry on the Procedures for Registration and Renewal of Registration Certificate for Hazardous Substances that are under the Control of Department of Industrial Works 2009 (B.E. 2009), clause 3 -Notification of Ministry of Industry on List of Hazardous Substances 1995 (B.E. 2538)</p> <p>NOTE: A Type 2 hazardous substance is subject to the registration requirement (unless exemption is provided), as well as the notification requirement. Once the facility has registered a Type 2 hazardous substance with the DIW, the DIW will issue a registration certificate to the facility. When notifying the DIW of its production, importation, exportation or possession of Type 2 hazardous substance, the facility must attach the Type 2 hazardous substance registration form with the form Vor.Or./Or.Kor.5. In addition, when importing or exporting any hazardous substance under the control of the DIW, the facility must also report the details of such a hazardous substance to the DIW using form Vor.Or./Or.Kor. 6. NOTE: Type 2 hazardous substances are subject to certain procedures and criteria, as established by the Minister of Industry and the Committee on Hazardous Substances, specifically: - composition, qualifications and mixtures of substances, containers, methods of extracting and testing containers, labels, production, import, export, sale, transport, storage, disposal, destruction, treatment of - hazardous substance containers, notification requirements, submission of specimens, or any other matters relating to the control, prevention, mitigation, or arrest of danger inflicted persons, animals, plants, - property, or the environment, from hazardous substances taking into consideration international conventions, and covenants; - requirement for specialized experts, or persons responsible for execution of the above; and - the deviation permitted from the quantity of the essential substance in the hazardous substance which qualifies it as a hazardous substance. NOTE: The facility that handles with hazardous substances under the control of other Ministries, such as the Ministry of Public Health, or the Ministry of Agriculture, will have to obtain a permit from those Ministries. But mostly, the hazardous substances that industrial facilities handle are generally under the control of the Ministry of Industry, and thus are required to obtain a permit from the DIW. NOTE: A registration certificate of Type 2 hazardous substance is valid for 3 years from the date of an issuance.</p>	<p><input type="radio"/> Not Applicable</p> <p><input type="radio"/> Compliant</p> <p><input type="radio"/> Non-Compliant</p>	
1.2 If the facility produces, imports, exports, or possesses a Type 3 hazardous substance, it has registered Type 3 hazardous substances and obtained a valid permit from the DIW. (See Guide Note)	<p>Regulatory Citations: -Hazardous Substances Act of 29 March B.E. 2535 (1992), sections 23 & 26 -Notification B.E. 2546 (2003) under the Hazardous Substances Act B.E. 2535 (1992) regarding List of Hazardous Substances -Notification No. 2 of the Ministry of Industry of 8 May 2000 (B.E. 2543) issued under the Hazardous Substances Act 1992 on the Inventory of Hazardous Substances -Notification of Ministry of Industry regarding List of Hazardous Substances (No.3) B.E. 2548 -Notification of Ministry of Industry Regarding List of Hazardous Substances (No. 5) B.E. 2549 -Notification of Ministry of Industry regarding List of Hazardous Substances (No. 6) B.E. 2552 -Notification of Ministry of Industry Regarding List of Hazardous Substances (No. 3) B.E. 2543 -Notification of Minister of Industry regarding List of Hazardous Substances (No. 2) B.E. 2547 -Notification of Ministry of Industry regarding the List of Hazardous Substances (No. 4) B.E. 2544 -Notification of Ministry of Industry regarding List of Hazardous Substances (No. 4) B.E. 2549 -Notification of Ministry of Industry on the Procedures for Registration and Renewal of Registration Certificate for Hazardous Substances that are under the Control of Department of Industrial Works 2009 (B.E. 2009), clause 3 -Notification of Ministry of Industry on List of Hazardous Substances 1995 (B.E. 2538)</p> <p>NOTE: Type 3 hazardous substances are subject to the same procedures and criteria as Type 2 hazardous substances, but it is also necessary to obtain a permit to produce, import, export or possess these substances from the DIW, within the Ministry of Industry. Permits may be revoked if the substance is reclassified, if the law is changed, if there are serious violations of the Act, or if there are substantial grounds for concern for public safety. NOTE: The facility that manufactures</p>	<p><input type="radio"/> Not Applicable</p> <p><input type="radio"/> Compliant</p> <p><input type="radio"/> Non-Compliant</p>	

	or imports Type 3 hazardous substances must register those substances with the DIW before it can proceed to apply for a permit. NOTE: Applications for permits to use Type 3 hazardous substances can be submitted to the authority appointed by the minister in charge of that substance. For instance, if the substance is under the control of Ministry of Industry, the facility must apply for a permit from the DIW. These permits are valid for two years, and must be renewed prior to expiry. A facility may continue to use the substance after the first permit has expired only if it has submitted a proper request for its renewal. All use of the substance must cease if the renewal is denied for any reason.		
1.3 If the facility produces or imports any Type 2 or Type 3 hazardous substance that is generally known as a substance that can cause danger during the production process and is not included in the list of hazardous substances published by the Ministry, the hazardous substance is registered with the DIW and a registration certificate is received. (Regulatory Citations: Hazardous Substances Act of 29 March B.E. 2535 (1992), section 36 - Notification of Department of Industrial Works prescribing a list of substances that are generally known as substances that can cause danger during the production process of 2000)	Regulatory Citations: Hazardous Substances Act of 29 March B.E. 2535 (1992), section 36 Notification of Department of Industrial Works prescribing a list of substances that are generally known as substances that can cause danger during the production process of 2000 NOTE: The following substances are considered substances that are generally known substances that can cause danger during the production process (วัตถุอันตรายที่กระบวนการผลิตและลักษณะที่อาจก่อให้เกิดอันตรายเป็นที่ยอมรับกันแพร่โดยทั่วไป): 1. AMMONIUM HYDROXIDE > 10% 2. HYDROCHLORIC ACID > 15% 3. SULFURIC ACID >50%	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
1.4 No Type 4 hazardous substance is produced, imported, exported or found in the facility. (Regulatory Citations: Hazardous Substances Act of 29 March B.E. 2535 (1992), section 43)	Regulatory Citations: Hazardous Substances Act of 29 March B.E. 2535 (1992), section 43 NOTE: Type 4 substances are the most strictly controlled. The production, import, export or possession of Type 4 substances is absolutely prohibited.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
1.5 If the facility imports used electronic or electrical equipment classified as type 3 hazardous substances, it has obtained a valid permit from the DIW. (Regulatory Citations: Notification of Ministry of Industry on the Requirements and Procedures for Importation of Used Electronic Equipment of 2003, clause 1-2)	Regulatory Citations: Notification of Ministry of Industry on the Requirements and Procedures for Importation of Used Electronic Equipment of 2003, clause 1-2 NOTE: The following used electrical and electronic equipment are classified as type 3 hazardous substances: 1. Refrigerators (harmonized system code (HS Code 84.18); 2. Reception apparatus for TV (HS Code 85.28); 3. Radiobroadcast receivers (HS Code 85.27); 4. Video recording or reproducing apparatus (HS Code 85.21); 5. DVD players (HS Code 85.21); 6. VCD players (HS Code 85.21); 7. Tape recorder and cassette players (HS Code 85.19, 85.20); 8. Air conditioners (HS Code 84.15); 9. Washing machine (HS Code 84.50); 10. Drying machine (HS Code 8451.21, 8451.29); 11. Dry-cleaning machine (HS Code 8451.10); 12. Electric rice cooker Harmonized system code (HS Code 8451.10). The complete list of electronic and electrical equipment classified as type 3 hazardous substance is available at: http://www2.diw.go.th/PIC/DOWNLOAD/WASTE/waste2/28.หลักเกณฑ์ในการพิจารณาให้ความเห็นชอบเกี่ยวกับการนำเข้าเศษ%20เศษตัด%20ของที่ใช้ไม่ได้ซึ่งเป็นเศษพล.pdf . NOTE: In this context "imports" means import for the following purposes: 1. Import for retail or reuse; 2. Import for repair or refurbishment; 3. Import for modification or refurbishment of equipment to meet its originally intended purpose; 4. Import for sorting or recycling purpose.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
1.6 If the facility imports or exports hazardous substances under the control of the DIW, the necessary information is provided on form Vor Or/Kor 6 (วอ./ภ. 6) to the DIW before proceeding with the customs clearance procedures. (Regulatory Citations: Notification of the Ministry of Industry of 2004 (B.E. 2547) issued under the Hazardous Substance Act 1992 Requiring Producers, Importers, Exporters and Possessors of Hazardous Substances to Provide Information On Hazardous Substances)	Regulatory Citations: Notification of the Ministry of Industry of 2004 (B.E. 2547) issued under the Hazardous Substance Act 1992 Requiring Producers, Importers, Exporters and Possessors of Hazardous Substances to Provide Information On Hazardous Substances NOTE: This requirement applies to all types of hazardous substances, including Type 1 hazardous substances. The facility must provide the following information in the Vor Or/Kor 6 form: names of the substances, formulas and proportions, trade names, generic names or abbreviated names (if any), amounts of the substances that will be imported or exported, the dates and the names of the customs/port where such substance will be imported into or exported out of Thailand.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
1.7 If the facility imports or exports hazardous substances listed under the Notification from the Ministry of Industry of 2004 requiring the producers, importers, exporters and possessors of hazardous substances to provide information about the hazardous substances, it reports all the required information to the DIW using the form Vor.Or./Or.Kor. 7 (วอ./ภ. 7) twice a year. (Regulatory Citations: Notification of the Ministry of Industry of 2004 (B.E. 2547) issued under the Hazardous Substance Act 1992 Requiring Producers, Importers, Exporters and Possessors of Hazardous Substances to Provide Information On Hazardous Substances, clause 4)	Regulatory Citations: Notification of the Ministry of Industry of 2004 (B.E. 2547) issued under the Hazardous Substance Act 1992 Requiring Producers, Importers, Exporters and Possessors of Hazardous Substances to Provide Information On Hazardous Substances, clause 4 NOTE: The manufacturers, importers, exporters or possessors of hazardous substances under the control of the Department of Industrial Works (DIW) are required to notify the DIW of the names of the substances, their formulas and proportions, trade names, generic names or abbreviated names (if any), registrations, amounts that are manufactured, whether they are imported, exported or possessed, amounts to be sold, and to whom they are sold and for what purpose. The facility must notify the DIW twice a year: 1. for operations during January - June, the notification must be submitted by July of that year. 2. for operations during July - December, the notification must be submitted by January of the following year. NOTE: Vor.Or./Or.Kor. 7 can be submitted online at: http://www2.diw.go.th/haz/vook7/login.asp .	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
2.0 Chemical Packaging Top			
2.1 Hazardous substances are packed in containers that are strong and safe. (Regulatory Citations: Ministerial Regulation No. 1/1994 issued under the Hazardous Substance Act 1992, clause 13)	Regulatory Citations: Ministerial Regulation No. 1/1994 issued under the Hazardous Substance Act 1992, clause 13 No further guidance has been provided.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
2.2 If the facility stores dangerous chemicals, a clear label is placed on every hazardous chemical package container or wrapper with the necessary details. (Regulatory Citations: Notification of the Ministry of Interior of 22 August 1991 issued under the Notification of Revolutionary Party no. 103 on Working Safety with Regard to dangerous Chemicals, clause 4 - Notification of the Department of Labor Protection and Welfare Prescribing the List of Dangerous Chemicals of B.E. 2535 (1992), Annex 1-2)	Regulatory Citations: Notification of the Ministry of Interior of 22 August 1991 issued under the Notification of Revolutionary Party no. 103 on Working Safety with Regard to dangerous Chemicals, clause 4 Notification of the Department of Labor Protection and Welfare Prescribing the List of Dangerous Chemicals of B.E. 2535 (1992), Annex 1-2 NOTE: "Dangerous chemicals" mean hazardous chemicals that are listed under Appendix 1 and 2 of the Notification of the Department of Labor and Social Welfare, Ministry of Labor and Social Welfare of 1992 (B.E. 2535) Prescribing the List of Chemical Substances. There are 1,580 dangerous chemicals listed under the Appendix 1 such as: - BENZIDINE - BERYLLIUM (POWDERS, COMPOUNDS) - ARSENIC HYDRIDE (ARSINE - CHLORINE - HYDROGEN SULPHIDE - CARBON DISULPHIDE - BROMINE - FLUOROACETIC ACID, SALTS. Appendix 2 lists 179 dangerous chemicals by the volumes that render them to be classified as "dangerous chemicals" for instance: - BERYLLIUM (POWDERS, COMPOUNDS): 10 kg. - ARSENIC HYDRIDE (ARSINE): 10 kg. - AMMONIA: 500 tons; - NITROGEN OXIDE: 50 tons; - PHORATE: 100 kg. Appendix 1 and 2 are available at: http://www.ratchakitcha.soc.go.th/DATA/PDF/2535/D/113/1.PDF . NOTE: The labels must contain symbols indicating harm and the words "hazardous chemical" (สารเคมีอันตราย) or "poisonous substance" (วัตถุมีพิษ) in Thai in prominent red or black writing larger than the other words: - the chemical or	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	

	scientific name of the chemical; - the quantity and composition of the chemical; - the dangers of the chemical; - the proper methods of storage, use, transport and packaging; and - the best first aid treatment and the recommendation to seek a medical officer immediately in case a person shows symptoms of an illness caused by exposure to the chemical.		
2.3 If the facility produces hazardous substances, it is provided with proper containers and labels. (Regulatory Citations: Hazardous Substances Act of 29 March B.E. 2535 (1992), sections 59)	Regulatory Citations: Hazardous Substances Act of 29 March B.E. 2535 (1992), sections 59 No further guidance has been specified.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
2.4 If the facility manufactures or imports any controlled volatile substances for sale in Thailand, it has complied with the labeling requirements. (Regulatory Citations: Ministerial Regulation of 1991 issued under the Emergency Decree on Controlling the Use of Volatile Substances, Clause 1-Notification Prescribing the Names, Types and Packaging Requirements for Certain Volatile Substances(2011), Clause 2)	Regulatory Citations: Ministerial Regulation of 1991 issued under the Emergency Decree on Controlling the Use of Volatile Substances, Clause 1-Notification Prescribing the Names, Types and Packaging Requirements for Certain Volatile Substances(2011), Clause 2 NOTE: Controlled volatile substances are listed as follows: 1. Aliphatic hydrocarbon and Aromatic hydrocarbon): 1.1 Toluene (methylbenzene) Chemical structure: C ₆ H ₅ CH ₃ , [CAS Number 108-88-3] 1.2 Methyl ethyl ketone (butan-2-one) Chemical structure: CH ₃ COCH ₂ CH ₃ , [CAS Number 78-93-3] 1.3 Methyl isobutyl ketone (4-Methylpentan-2-one) Chemical structure: CH ₃ COCH ₂ CH(CH ₃) ₂ , [CAS Number 108-10-1] 2. Ester: 2.1 Ethyl acetate Chemical structure: CH ₃ COOC ₂ H ₅ , [CAS Number 141-78-6] 2.2 Cellosolve acetate (2-ethoxyethyl acetate) Chemical structure: CH ₃ COOCH ₂ CH ₂ OC ₂ H ₅ , [CAS Number 111-15-9] 2.3 Methyl acetate Chemical structure: CH ₃ COOCH ₃ , [CAS Number 79-20-9] 2.4 n-Butyl acetate (butyl acetate) Chemical structure: CH ₃ COO(CH ₂) ₃ CH ₃ , [CAS Number 123-86-4] 2.5 butan-2-yl acetate Chemical structure: CH ₃ COOCH(CH ₃)CH ₂ CH ₃ , [CAS Number 105-46-4] 3. Volatile alkyl nitrite 3.1 Amyl nitrite (3-methylbutyl nitrite) Chemical structure: (CH ₃) ₂ CHCH ₂ CH ₂ CH ₂ ONO, [CAS Number 110-46-3] 3.2 Cyclohexyl nitrite Chemical structure: C ₆ H ₁₁ ONO, [CAS Number 5156-40-1] 3.3 Ethyl nitrite Chemical structure: CH ₃ CH ₂ ONO, [CAS Number 109-95-5] 3.4 Isobutyl nitrite (2-methylpropyl nitrite) Chemical structure: (CH ₃) ₂ CHCH ₂ ONO, [CAS Number 542-56-3] 3.5 Isopropyl nitrite (Propan-2-yl nitrite) Chemical structure: (CH ₃) ₂ CHONO, [CAS Number 541-42-4] 3.6 n-Butyl nitrite (butyl nitrite) Chemical structure: CH ₃ CH ₂ CH ₂ CH ₂ ONO, [CAS Number 544-16-1] 4. Ether: 4.1 Butyl cellosolve (2-butoxyethanol) Chemical structure: HOCH ₂ CH ₂ OC ₄ H ₉ , [CAS Number 111-76-2] 4.2 Cellosolve (2-ethoxyethanol) Chemical structure: HOCH ₂ CH ₂ OC ₂ H ₅ , [CAS Number 110-80-5] 4.3 Methyl cellosolve (2-methoxyethanol) Chemical structure: HOCH ₂ CH ₂ OC ₂ H ₅ , [CAS Number 109-86-4]. NOTE: The Ministerial Regulation of 1991 sets forth the following labeling requirements: 1. Labels of the packages must contain the following information in Thai: 1.1 The phrase "สารระเหย" (volatile substances) 1.2 Name and location of manufactures, importers as the case may be 1.3 Quantity (in metric units) 1.4 Chemical names and ratio of mixtures contained in the substances 1.5 Methods of usage and storage 1.6 Warning phrase "Warning. Do not inhale. Harmful to health" ("คำเตือน ห้ามสูดดม เป็นอันตรายต่อชีวิต") All phrases must be in red color letters on white background label. Labels may contain the same information as listed in 1.1 to 1.6 in other language(s), if they are not conflict with Thai language. Information in other languages must be made with letters that are smaller than those in Thai. 2. If the containers or packages of volatile substances are larger than 550 ml or 550 gram, and are labeled with pictures or phrases in compliance with other laws or regulations, manufacturers, importers, and distributors are not required to comply with the labeling requirements above.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
2.5 If the facility manufactures or imports any of volatile substances or products containing volatile substances listed under the Notification of 17 March 2011, it complies with the labeling requirements as prescribed under the Ministerial Regulation of 1991 adopted under the Emergency Decree Controlling the Use of Volatile Substances of 1990. (Regulatory Citations: Emergency Decree on Controlling the Use of Volatile Substances B.E. 2533 (1990), clause 14-Ministerial Regulation of 1991 issued under the Emergency Decree on Controlling the Use of Volatile Substances, clause 1-Notification Prescribing the Names, Types and Packaging Requirements for Certain Volatile Substances(2011), clauses 2-3)	Regulatory Citations: Emergency Decree on Controlling the Use of Volatile Substances B.E. 2533 (1990), clause 14-Ministerial Regulation of 1991 issued under the Emergency Decree on Controlling the Use of Volatile Substances, clause 1-Notification Prescribing the Names, Types and Packaging Requirements for Certain Volatile Substances(2011), clauses 2-3 NOTE: Under the Notification of 17 March 2011, the following chemical substances, including chemical substances under different names but that have the same chemical structures as prescribed below, are considered controlled "volatile substances": 1. Aliphatic hydrocarbon and Aromatic hydrocarbon): 1.1 Toluene (methylbenzene) Chemical structure: C ₆ H ₅ CH ₃ , [CAS Number 108-88-3] 1.2 Methyl ethyl ketone (butan-2-one) Chemical structure: CH ₃ COCH ₂ CH ₃ , [CAS Number 78-93-3] 1.3 Methyl isobutyl ketone (4-Methylpentan-2-one) Chemical structure: CH ₃ COCH ₂ CH(CH ₃) ₂ , [CAS Number 108-10-1] 2. Ester: 2.1 Ethyl acetate Chemical structure: CH ₃ COOC ₂ H ₅ , [CAS Number 141-78-6] 2.2 Cellosolve acetate (2-ethoxyethyl acetate) Chemical structure: CH ₃ COOCH ₂ CH ₂ OC ₂ H ₅ , [CAS Number 111-15-9] 2.3 Methyl acetate Chemical structure: CH ₃ COOCH ₃ , [CAS Number 79-20-9] 2.4 n-Butyl acetate (butyl acetate) Chemical structure: CH ₃ COO(CH ₂) ₃ CH ₃ , [CAS Number 123-86-4] 2.5 butan-2-yl acetate Chemical structure: CH ₃ COOCH(CH ₃)CH ₂ CH ₃ , [CAS Number 105-46-4] 3. Volatile alkyl nitrite 3.1 Amyl nitrite (3-methylbutyl nitrite) Chemical structure: (CH ₃) ₂ CHCH ₂ CH ₂ CH ₂ ONO, [CAS Number 110-46-3] 3.2 Cyclohexyl nitrite Chemical structure: C ₆ H ₁₁ ONO, [CAS Number 5156-40-1] 3.3 Ethyl nitrite Chemical structure: CH ₃ CH ₂ ONO, [CAS Number 109-95-5] 3.4 Isobutyl nitrite (2-methylpropyl nitrite) Chemical structure: (CH ₃) ₂ CHCH ₂ ONO, [CAS Number 542-56-3] 3.5 Isopropyl nitrite (Propan-2-yl nitrite) Chemical structure: (CH ₃) ₂ CHONO, [CAS Number 541-42-4] 3.6 n-Butyl nitrite (butyl nitrite) Chemical structure: CH ₃ CH ₂ CH ₂ CH ₂ ONO, [CAS Number 544-16-1] 4. Ether: 4.1 Butyl cellosolve (2-butoxyethanol) Chemical structure: HOCH ₂ CH ₂ OC ₄ H ₉ , [CAS Number 111-76-2] 4.2 Cellosolve (2-ethoxyethanol) Chemical structure: HOCH ₂ CH ₂ OC ₂ H ₅ , [CAS Number 110-80-5] 4.3 Methyl cellosolve (2-methoxyethanol) Chemical structure: HOCH ₂ CH ₂ OC ₂ H ₅ , [CAS Number 109-86-4]. NOTE: The products that contain volatile substances such as thinner, lacquers, synthetic organic adhesive, neoprene based, vinyl resin based, natural organic adhesives, rosin, natural rubber or isoprene and cellulose compounds are also considered "volatile substances" under this Notification. NOTE: The Ministerial Regulation of 1991 sets forth the following labeling requirements: 1. Labels of the packages must contain the following information in Thai: 1.1 The phrase "สารระเหย" (volatile substances) 1.2 Name and location of manufactures, importers as the case may be 1.3 Quantity (in metric units) 1.4 Chemical names and ratio of mixtures contained in the substances 1.5 Methods of usage and storage 1.6 Warning phrase "Warning. Do not inhale. Harmful to health" ("คำเตือน ห้ามสูดดม เป็นอันตรายต่อชีวิต").	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
3.0 Cadmium Top			
3.1 If the facility produces, imports, exports or possesses cadmium or substances containing cadmium, it has obtained a permit from the DIW. (Regulatory Citations: Hazardous Substances Act of 29 March B.E. 2535 (1992))	Regulatory Citations: Hazardous Substances Act of 29 March B.E. 2535 (1992) NOTE: The following are dangerous Type 3 substances: cadmium chloride, cadmium cyanide, cadmium fluoride, cadmium iodide, cadmium oxide, and carbon disulfide. The production, import, export, or possession of dangerous Type 3 substances requires a permit.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
3.2 If the facility produces, imports, exports or possesses a mercury substance, it has obtained a permit from the DIW. (Regulatory Citations: Hazardous Substances Act of 29 March B.E. 2535 (1992))	Regulatory Citations: Hazardous Substances Act of 29 March B.E. 2535 (1992) NOTE: Mercury is a dangerous Type 3 substance. The production, import, export, or possession of dangerous Type 3 substances requires a permit.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
3.3 If the facility produces, imports, exports or possesses lead, it has obtained a permit from the DIW. (Regulatory Citations: Hazardous Substances Act of 29 March B.E. 2535 (1992))	Regulatory Citations: Hazardous Substances Act of 29 March B.E. 2535 (1992)	<input type="radio"/> Not Applicable	

March B.E. 2535 (1992)	NOTE: Lead is a Type 3 hazardous substance. The production, import, export, or possession of dangerous Type 3 substances requires a permit.	<input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
3.4 The facility does not import the following asbestos: asbestos-actinolite, asbestos-anthophyllite, and asbestos-terrolite. (Regulatory Citations: -Hazardous Substances Act of 29 March B.E. 2535 (1992), Sec.43)	Regulatory Citations: -Hazardous Substances Act of 29 March B.E. 2535 (1992), Sec.43 NOTE: These asbestos are classified as class 4 hazardous substances which are prohibited from being imported into Thailand.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
3.5 The facility does not import or export any fake hazardous substances, sub-standard hazardous substances, hazardous substances of deteriorating quality, hazardous substances that have not been appropriately registered, or hazardous substances whose registration has been revoked. (Regulatory Citations: -Hazardous Substances Act of 29 March B.E. 2535 (1992), section 45)	Regulatory Citations: -Hazardous Substances Act of 29 March B.E. 2535 (1992), section 45 NOTE: If such types of hazardous substances are found, the official will be notified and destruction of hazardous substances will be done in accordance with the prescribed procedures. NOTE: The following substances are considered as fake substances: 1. Substances artificially made to imitate the genuine hazardous substance either wholly or partially; 2. Hazardous substances misrepresented as genuine hazardous substance, or of which the expiration date is incorrect; 3. Hazardous substances of which the name or trademark of the producer or manufacturing location is falsified; 4. Hazardous substances misrepresented as the registered hazardous substance; 5. Hazardous substances of which the levels of required components do not meet the standard or are in excess of the level determined by the Minister for that particular substances.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
3.6 If the facility uses chemical waste in its production, it has submitted an annual report on its plan regarding the usage of chemical waste in its operation to the DIW. (Regulatory Citations: -Notification of Department of Industrial Works on Importation of Chemical Wastes of 1996, clause 3)	Regulatory Citations: -Notification of Department of Industrial Works on Importation of Chemical Wastes of 1996, clause 3 NOTE: At minimum, the report must include: (1) the name or chemical/physical composition of the chemical waste; (2) the name of the originator and of the origination process; (3) the quantity of chemical waste used in its production and in the production process; (4) the types of substances added into the chemical waste before its use in the production process; (5) the types of products that are made from such chemical waste; (6) the environmental protection measures and safety system of the facility.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
3.7 The facility does not import restricted persistent organic pollutants. (Regulatory Citations: -Hazardous Substances Act of 29 March B.E. 2535 (1992))	Regulatory Citations: -Hazardous Substances Act of 29 March B.E. 2535 (1992) NOTE: Thailand has ratified the Stockholm Convention on Persistent Organic Pollutants (POPs) and transposed its requirements into the Hazardous Substances Act of 29 March 1992 (B.E. 2535). The Stockholm Convention on Persistent Organic Pollutants and the Hazardous Substances Act of 29 March 1992 (B.E. 2535) bans the importation of the following POPs in Thailand: Aldrin, Chlordane, DDT, Dieldrin, Endrin, Heptachlor, Hexachlorobenzene, Mirex, PCBs and Toxaphene.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
4.0 Material Safety Data Sheets Top			
4.1 If the facility stores or uses hazardous substances as defined by the Hazardous Substance Act of 1992, material safety data sheets (MSDS) for each substance are provided and made accessible to anyone in the factory who may be exposed to the substance. (Regulatory Citations: -Ministerial Regulation no.3 of 24 September 1992 in respect of types of factories that are required to submit a report of the factory's operations (i.e. factories engaging in manufacturing, storing or using boilers), clause 6)	Regulatory Citations: -Ministerial Regulation no.3 of 24 September 1992 in respect of types of factories that are required to submit a report of the factory's operations (i.e. factories engaging in manufacturing, storing or using boilers), clause 6 NOTE: The MSDS must contain significant hazardous substance information including the description, chemical name and formula, physical and chemical properties, health hazards and proper handling procedures. Under the Notification of Ministry of Industry on the Procedures for Registration and Renewal of Registration Certificate for Hazardous Substances that are under the Control of Department of Industrial Works 2009 (B.E. 2009), MSDS must contain the following information: 1. Product and Company Identification - Common chemical name of chemicals/products; - Formula/ Chemical Structure; - CAS Number; - Other names; - Name of Producer/ Distributor; - Address (in detail); - Telephone number/Fax number; - Telephone number in case of emergency; 2. Composition/ Information on Ingredients: please specify common chemical name and its percentage in mixtures for every substance. 3. Physical and Chemical Properties (such as) - Melting point; - Density; - Flash point; - Explosive Limits; 4. Hazards Identification - Main Hazards (e.g., ignitable, explosive, corrosive, etc); 5. First-aid Measures; 6. Fire-fighting Measures; 7. Accidental Release Measures - Public protection; - Environmental protection; - Mitigation procedure for spilled or leaked chemicals/ products; 8. Handling and Storage - Handling requirements; - Warning; - Precautions; - Ventilation; - Safe handling procedure; - Storage requirements; - Incompatible chemicals. 9. Safety Standards/Exposure Controls/Personal Protection and Threshold Limit Values in Time Weighted Average (TLV-TWA) 10. Stability and Reactivity 11. Toxicological Information 12. Ecological Information 13. Disposal Considerations 14. Transport Information (must specify UN Number, UN Class, and UN Packing Group) 15. Symbol/Label.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
4.2 If the facility manufactures, imports or supplies (including importing and supplying for its own use) any hazardous substances as defined in Hazardous Substance Act of 1992 for use at work, material safety data sheets are provided for such substances and has been submitted to the DIW. (Regulatory Citations: - Ministerial Regulation no.3 of 24 September 1992 in respect of types of factories that are required to submit a report of the factory's operations (i.e. factories engaging in manufacturing, storing or using boilers), clause 6)	Regulatory Citations: -Ministerial Regulation no.3 of 24 September 1992 in respect of types of factories that are required to submit a report of the factory's operations (i.e. factories engaging in manufacturing, storing or using boilers), clause 6 NOTE: If changes have been made to the information available a study needs to be carried out by an expert and submitted to the DIW. NOTE: The MSDS must contain significant hazardous substance information including the description, chemical name and formula, physical and chemical properties, health hazards and proper handling procedures. The MSDS must include the following information in Thai: 1. Product and Company Identification - Common chemical name of chemicals/products; - Formula/ Chemical Structure; - CAS Number; - Other names; - Name of Producer/ Distributor; - Address (in detail); - Telephone number/Fax number; - Telephone number in case of emergency; 2. Composition/ Information on Ingredients: please specify common chemical name and its percentage in mixtures for every substance. 3. Physical and Chemical Properties (such as) - Melting point; - Density; - Flash point; - Explosive Limits; 4. Hazards Identification - Main Hazards (e.g., ignitable, explosive, corrosive, etc); 5. First-aid Treatment; 6. Fire-fighting Measures; 7. Accidental Release Measures - Public protection; - Environmental protection; - Mitigation procedure for spilled or leaked chemicals/ products; 8. Handling and Storage - Handling requirements; - Warning; - Precautions; - Ventilation; - Safe handling procedure; - Storage requirements; - Incompatible chemicals. 9. Safety Standards/Exposure Controls/Personal Protection and Threshold Limit Values in Time Weighted Average (TLV-TWA) 10. Stability and Reactivity 11. Toxicological Information 12. Ecological Information 13. Disposal Considerations 14. Transport Information (must specify UN Number, UN Class, and UN Packing Group) 15. Symbol/Label.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
5.0 Ozone Depleting Substances Top			
5.1 The facility has obtained a permit from the Ministry of Industry prior to importing and/or exporting any Ozone Depleting Substance (ODS). (Regulatory Citations: -Hazardous Substances Act of 29 March B.E. 2535 (1992)-Notification of Ministry of Industry on the prohibition of the use of CFCs and Trichloroethane in the production process B.E. 2548 (2005)-Notification of	Regulatory Citations: -Hazardous Substances Act of 29 March B.E. 2535 (1992) -Notification of Ministry of Industry on the prohibition of the use of CFCs and Trichloroethane in the production process B.E. 2548 (2005) -Notification of Department of Industrial Works on the CFCs Importation Restriction of 2004 NOTE: Thailand is party to the Montreal Protocol on Substances that Deplete the Ozone Layer, which mandates reduction	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	

Department of Industrial Works on the CFCs Importation Restriction of 2004	of ozone-depleting substances (ODSs). NOTE: Because the consumption of ODSs in Thailand in 1991 was 0.19 kg/capita-yr, Thailand is permitted extra an 10 years to phase out the use of ODSs.		
5.2 The facility does not use CFCs or 1-1-1-Trichloroethane in its operations. (Regulatory Citations: Notification of Ministry of Industry on the prohibition of the use of CFCs and Trichloroethane in the production process B.E. 2548 (2005), clause 2)	Regulatory Citations: Notification of Ministry of Industry on the prohibition of the use of CFCs and Trichloroethane in the production process B.E. 2548 (2005), clause 2 No further guidance has been provided.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	
5.3 The facility does not import CFC substances. (Regulatory Citations: Notification of Department of Industrial Works on the CFCs Importation Restriction of 2004)	Regulatory Citations: Notification of Department of Industrial Works on the CFCs Importation Restriction of 2004 NOTE: This ban applies since 1 January 2010.	<input type="radio"/> Not Applicable <input type="radio"/> Compliant <input type="radio"/> Non-Compliant	

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