

A Guide to the Registration of Chemical Waste Producers



Environmental Protection Department
Hong Kong
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Preface

The purpose of this guide is to introduce the registration provisions of the Waste Disposal (Chemical Waste)(General) Regulation (the Regulation) and the procedure for identifying chemical waste generation.

This guide is for explanatory purposes only. In case of doubt, the reader is advised to consult the Regulation itself. References to relevant sections of the Regulation are shown in brackets following the headings. Copies of the Regulation are on sale at the Government Publications Centre.

Enquiries concerning the provisions of the Regulation may be made to the Environmental Protection Department at:

Address

Environmental Protection Department
28/F, Southorn Centre
130 Hennessy Road, Wanchai, Hong Kong.

Telephone : 2838 3111

E-mail : enquiry@epd.gov.hk

Other relevant publications:

- [A Guide to the Chemical Waste Control Scheme](#)
- [Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes](#)

The above publications are available from the website of Environmental Protection Department.

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1. INTRODUCTION

■ The Waste Disposal (Chemical Waste)(General) Regulation (the Regulation) made under the Waste Disposal Ordinance (Cap. 354) provides for the control of chemical waste in Hong Kong. Under the Regulation, chemical waste producers are required to register with the Director of Environmental Protection. This booklet provides guidance for identifying activities that produce chemical waste and for complying with the registration requirements. Further details of the control scheme are provided in "[A Guide to the Chemical Waste Control Scheme](#)".

■ All chemical waste producers are required to apply for registration before engaging in any activity that generates chemical waste. Failure to comply with this requirement is an offence and liable on conviction to a fine of \$200,000 and imprisonment of 6 months.

2. WHAT IS A “CHEMICAL WASTE PRODUCER”? (Sections 2 & 3)

■ Chemical waste is defined as any substance or thing being scrap material, effluent or an unwanted substance or byproduct arising from the application of or in the course of any substance or chemical specified in Schedule 1 of the Regulation if such substance or chemical occurs in such form, quantity and concentration so as to cause pollution or constitute a danger to health or risk of pollution to the environment.

■ Any person who produces chemical waste or causes it to be produced will be defined as a chemical waste producer and is required to register with the Director of Environmental Protection.

■ The flowchart in Figure 1 will assist you in determining whether you are a chemical waste producer and are therefore subject to the registration requirement. The procedure generally involves the following steps:

- Identify the nature and characteristics of the waste by examining the process/activity which generates the waste, by consulting product information (e.g. safety data sheets) of the chemicals being used and other relevant information. If necessary, arrange laboratory tests to determine the composition of the waste.

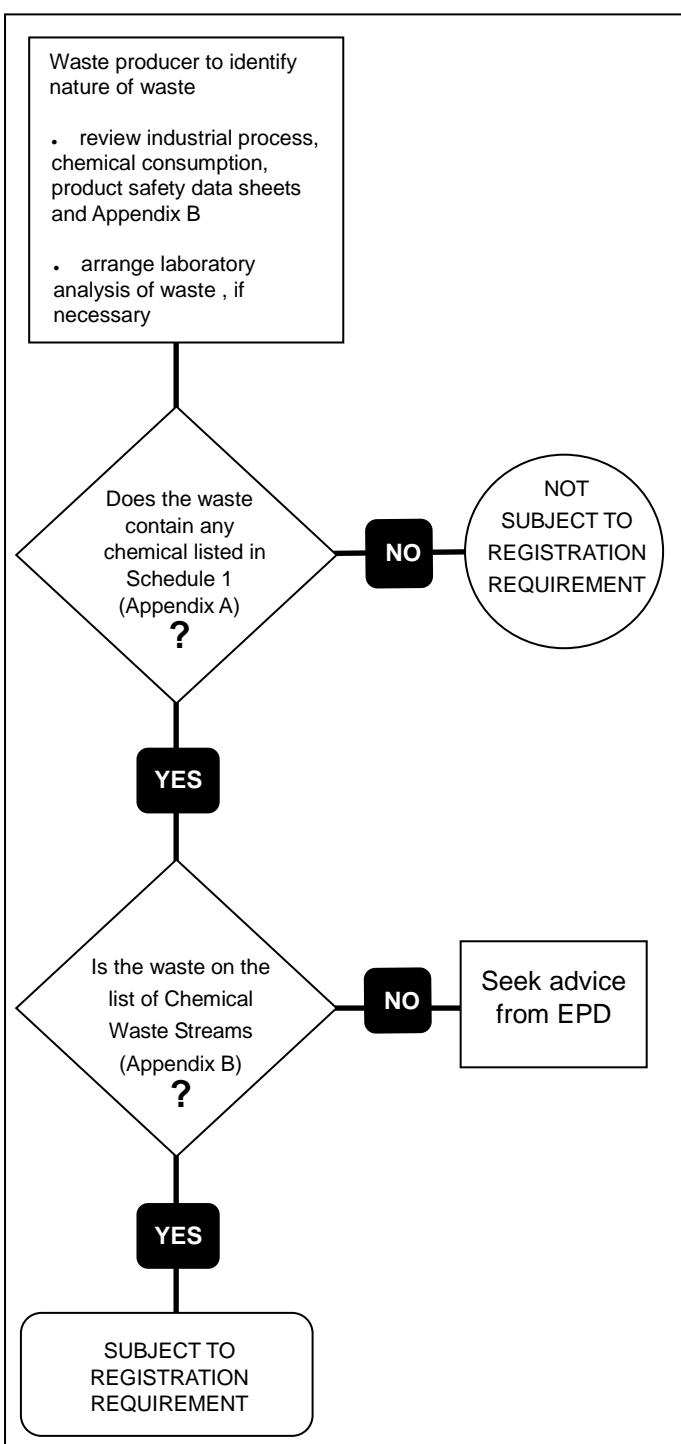


Figure 1 Procedure for identifying chemical waste generation

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- (ii) Check the information against the list of chemicals and substances contained in Schedule 1 to the Regulation, reproduced at Appendix A. If the waste does not contain any substance named in the Schedule, it is not a chemical waste.
 - (iii) If the waste contains one or more chemical or substance in the Schedule, you need to check whether the waste is listed in Appendix B (Parts I to III). If yes, the waste is a chemical waste and you should proceed with the registration process. If the waste is generated from a process or activity which is not included in Appendix B (e.g. a new process/technology), you should contact Environmental Protection Department (EPD) for guidance.
 - (iv) If you are unclear or having difficulty in classifying your waste, you should contact EPD for guidance.
- In addition to the manufacturing and service industries, the following establishments/activities may also produce chemical waste:-
- Trading firms which may produce off-specification, expired or damaged products containing chemicals listed in the Schedule;
 - Construction, building or renovation contractors using chemicals;
 - Building demolition work producing asbestos waste;
 - Private testing laboratories;
 - Hospitals with medical/research laboratories;
 - Educational establishments such as schools, colleges, tertiary institutions with science laboratories;
 - Government departments.

3. THE REGISTRATION PROCESS (Sections 6 & 7)

- The registration process involves two simple steps:-

Step 1: complete a registration form and return it to EPD.
Step 2: pay the registration fee.

- The registration forms can be downloaded online at http://www.epd.gov.hk/epd/sites/default/files/epd/tc_chi/application_for_licences/applic_froms/files/epd129.pdf.
- The following documents are required for registration:
 - (i) Completed application form;
 - (ii) Copy of the identity card/certificate of incorporation and business registration certificate of the applicant; and
 - (iii) Any other supporting document, e.g. authorization letter.

STEP 1 - Completing the registration form

- Each chemical waste producer requires one application for registration of each location or premises of the establishment where chemical waste is produced.
- Please complete the form clearly by typing or writing in black or blue ink. If there is no sufficient space in any column to fill in all the information, you may use separate sheet(s) of paper, which are numbered and duly signed by the applicants.
- The information to be provided is set out below (see the sample registration form at Appendix C):-

Items 1-6: Particulars of waste producer

- Enter full particulars of the waste producer. The applicant may be an individual, a company, a partnership or an organisation. For a company, partnership or organisation, its full name should be entered

Items 7-8: Particulars of waste generating establishment

- Enter the name of the establishment in full and the business registration certificate number, if applicable.

Item 9: Nature of business

- Enter the nature of business of the establishment(s). For an industrial establishment, the major product type(s) and the nature of the process(es) involved should also be specified. For example, manufacture of metal toys - electroplating. Refer to Appendix B for description of industrial/trade sectors and processes.

Item 10: Waste types

- Set out the major types of chemical waste generated or expected to be generated at the establishment(s). For example, spent acid, solvent waste, waste lubrication oil. The description should cover chemical wastes generated on both a regular or occasional basis.

Items 11-15: Address and contact person

- Enter the address(es) of the establishment(s) and full particulars of the contact person(s) who would be responsible for day-to-day supervision.

Items 16-20: Declaration

- If the waste producer is an individual, the declaration must be filled by the individual who applies for registration. In the case of a company or an organisation, this part must be filled by a person authorized by the company or the organisation, as the case may be. If the waste producer is a partnership, it should be filled by one of the partners. Documentary proof of authorization is required.

- The completed form should be returned to EPD at the address shown in Appendix 3 of the following website: http://www.epd.gov.hk/epd/sites/default/files/epd/tc_chi/application_for_licences/applic_forms/files/epd129.pdf.

STEP 2 - Payment of registration fee

- Advance payment of the \$265 application fee can be made in parallel with submission of the registration form, preferably by cheque or EPS. However, for application submitted through mail, only cheque will be accepted. Cheque of payment should be crossed and made payable to "The Government of Hong Kong Special Administrative Region". Upon receipt of the registration form, EPD will issue an acknowledgement note by post. You may be requested to provide more information, where necessary. Once the application is complete, a Demand Note will be issued to you (if advance payment of the registration fee is not made) requesting payment of the registration fee within a specific period, normally two weeks. Payment should be made according to the instructions as stipulated on the Demand Note.

If the payment is not received within the specified period, your application will be cancelled and a new application will have to be submitted.

- After payment, EPD will issue a written confirmation

and assign a Waste Producer Number to each successful applicant. This number is a unique reference for each waste producer and should be quoted in all future correspondence with EPD and also on other notices/forms (e.g. trip-tickets). Where an application is found not to be related to chemical waste, EPD will also issue a written confirmation to that effect and no registration is required.

4. OTHER REQUIREMENTS (Section 7)

- Registration is an one-off requirement and not subject to renewal. However, each registered waste producer has the obligation to inform EPD as soon as practicable of any change in the particulars of the registration, for example, changes in contact person, telephone number and correspondence address. Such notifications should be made in writing within two weeks of the change. No payment is required. Failure to notify EPD is an offence under the Regulation and is liable to a fine of \$10,000.
- Registration is not transferable and will only be valid in respect of the person and the waste producing premises being registered. If either the name of the registered waste producer, or the address of the waste producing premises is changed, the registered waste producer is required to inform EPD so that the original registration may be cancelled. No fee is required for the cancellation of the original registration. However, a new application with a current registration fee is required for the registration of the new name or the new waste producing premises.
- Upon registration, EPD may issue a notice requesting you to furnish more information on the wastes you produce. According to section 23B of the Waste Disposal Ordinance, you will be required to furnish the information within the period specified in the notice. Any person who fails to comply with the requirement or provides inaccurate/false information or omits information commits an offence and is liable to a fine of \$100,000.
- Applicant for registration as a chemical waste producer at a new location or premises is reminded to inform EPD of any previous Waste Producer Registration that you no longer wish to retain by completing Appendix 1 of the following link:
http://www.epd.gov.hk/epd/sites/default/files/epd/tc_chi/application_for_licences/applic_forms/files/epd129.pdf.

APPENDIX A

SCHEDULE OF SUBSTANCES AND CHEMICALS

Part A

	Code
Any substance to which the Antibiotics Ordinance (Cap. 137) applies.....	30
Asbestos.....	09
Dangerous drugs (as defined in the Dangerous Drugs Ordinance (Cap. 134)).....	10
Dangerous goods, category 2, NES... As defined in the Dangerous Goods Ordinance (Cap.295)	02
Dangerous goods, category 6, NES... As defined in the Dangerous Goods Ordinance (Cap.295)	04
Dangerous goods, category 9, NES... As defined in the Dangerous Goods Ordinance (Cap.295)	14
Dibenzofurans.....	19
Dioxins.....	19
Pesticides (as defined in the Register referred to in Section 4(b) of the Pesticides Ordinance (Cap. 133)).....	06
Poisons (Part I) (as defined in the Pharmacy and Poisons Ordinance (Cap. 138)).....	20
Polychlorinated biphenyls.....	29

Part B

Antimony and its compounds.....	66
Arsenic compounds.....	66
Barium compounds.....	66
Beryllium and its compounds.....	66
Boron compounds.....	66
Cadmium and its compounds.....	66
Chromium bearing solid tannery waste.....	56
Chromium and its compounds, NES.....	66
Cobalt and its compounds.....	66
Copper compounds/copper etchant.....	66/76
Cyanides.....	96
Dangerous goods, category 3, NES... As defined in the Dangerous Goods Ordinance (Cap.295)	38
Dangerous goods, category 4, NES... As defined in the Dangerous Goods Ordinance (Cap.295)	36
Dangerous goods, category 5, NES... As defined in the Dangerous Goods Ordinance (Cap.295)	33
Dangerous goods, category 7, NES... As defined in the Dangerous Goods Ordinance (Cap.295)	35
Dangerous goods, category 8, NES... As defined in the Dangerous Goods Ordinance (Cap.295)	34
Dangerous goods, category 10, NES... As defined in the Dangerous Goods Ordinance (Cap.295)	39
Halogenated organic solvents and compounds.....	49
Lead and its compounds.....	66
Manganese and its compounds.....	66
Mercury and its compounds.....	66
Mineral oils employed for engine lubrication.....	73
Mineral oils, NES.....	63
Nickel and its compounds.....	66
Non-halogenated organic solvents and compounds.....	43
Organo lead compounds.....	86

Organic mercury compounds.....	86
Organic tin compounds.....	86
Paints.....	53
Pesticides (as defined in the Register referred to in Section 4(a) of the Pesticides Ordinance (Cap. 133)).....	46
Pharmaceutical products and medicines, NES.....	40
Phosphorus compounds excluding phosphates.....	68
Selenium compounds.....	66
Silver compounds.....	66
Sulphides.....	98
Thallium and its compounds.....	66
Tin compounds.....	66
Vanadium compounds.....	66
Zinc compounds.....	66

Acids, alkalis and corrosive compounds

Acetic acid above 10% acetic acid by weight.....	48
Acids or acidic solutions, NES with acidity equivalent to above 5% nitric acid by weight.....	48
Ammonia solution above 10% ammonia by weight.....	58
Bases or alkaline solutions, NES, with alkalinity equivalent to above 1% sodium hydroxide by weight.....	58
Chromic acid above 1% chromic acid by weight.....	78
Fluoboric acid above 5% fluoboric acid by weight.....	48
Formic acid above 10% formic acid by weight.....	48
Hydrochloric acid above 5% hydrochloric acid by weight.....	48
Hydrofluoric acid above 0.1% hydrofluoric acid by weight.....	48
Hydrogen peroxide solution above 8% hydrogen peroxide by weight.....	55
Nitric acid above 5% nitric acid by weight.....	48
Perchloric acid above 5% perchloric acid by weight.....	48
Phosphoric acid above 5% phosphoric acid by weight.....	48
Potassium hydroxide solution above 1% potassium hydroxide by weight.....	58
Potassium hypochlorite solution above 5% active chlorine.....	88
Sodium hydroxide solution above 1% sodium hydroxide by weight.....	58
Sodium hypochlorite solution above 5% active chlorine.....	88
Sulphuric acid above 5% sulphuric acid by weight.....	48

NES = Not elsewhere specified

CHEMICAL WASTE STREAMS FROM GENERAL PROCESSES / ACTIVITIES

GENERAL PROCESS	PROC CODE	DESCRIPTION	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
CHEMICAL TESTING					
Chemical testing	T03	Analysis or testing to ensure quality	Acid Alkali Organic solvent Heavy metal compounds Toxic compounds	Spent acid Spent alkali Spent halogenated solvent Spent non-halogenated solvent Spent solution containing heavy metals Waste containing chemicals under Schedule 1	T03 L48 T03 L58 T03 L49 T03 L43 T03 L66 T03 *
MAINTENANCE					
Filter replacement	F03	Replacement of spent filter cartridge		Spent filter containing heavy metals	F03 S66
Maintenance, battery	M31	Maintenance of batteries	Sulphuric acid Potassium hydroxide Lead-acid battery Battery from electric vehicle	Spent acidic electrolyte Spent alkaline electrolyte Scrap battery cell containing heavy metals	M31 L48 M31 L58 M31 S66
Maintenance, brake/clutch	M32	Maintenance of (vehicles) brake/clutch linings		Asbestos waste	M32 S09
Maintenance, insulation/diaphragm	M33	Maintenance of equipment/structure containing asbestos (e.g. asbestos diaphragm, heat insulators, etc.)		Asbestos waste	M33 S09
Maintenance, n.e.s.	M40	Other maintenance activities producing chemical wastes		Waste containing chemicals under Schedule 1	M40 *
Oil retrofilling (renewal & drainage)	O01	Oil replacement from processing machines Oil retrofilling from transformers and cooling units	Lubricating oil Hydraulic oil Cooling oil Polychlorinated biphenyls (PCBs) dielectric fluid	Spent lubricating oil Spent mineral oil Spent mineral oil Spent polychlorinated biphenyls dielectric fluid	O01 L73 O01 L63 O01 L63 O01 L29
Mechanical machining	M03	General mechanical machining	Cutting oil/Cutting fluid	Spent mineral oil	M03 L63
Stripping, mechanical/manual	S32	Mechanical stripping of equipment coatings		Residue containing heavy metals	S32 M66
Stripping, metal	S33	Chemical stripping of metallic layer	Acid Cyanide	Spent acidic solution Spent solution containing cyanide	S33 L48 S33 L96
Stripping, n.e.s.	S40	Other stripping process producing chemical wastes		Waste containing chemicals under Schedule 1	S40 *
Cleaning	C06	Equipment cleaning	Acid Alkali Organic solvent	Spent acidic solution Spent alkaline solution Spent halogenated solvent Spent non-halogenated solvent	C06 L48 C06 L58 C06 L49 C06 L43
DAMAGED, EXPIRED, REJECTED, SCRAP & UNWANTED CHEMICALS OR PRODUCTS					
DAMAGED, EXPIRED, REJECTED, SCRAP & UNWANTED CHEMICALS OR PRODUCTS	Z00			Waste containing chemicals under Schedule 1	Z00 *

* Refer to remarks on page B-20
(n.e.s.= not elsewhere specified)

APPENDIX B (II)

CHEMICAL WASTE STREAMS OF SPECIFIC INDUSTRIAL / TRADE SECTORS

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
311-3 FOOD MANUFACTURING & BEVERAGE INDUSTRIES						
3111	Slaughtering, preparing and preserving meat	Chemical testing	T03	Acid Alkali Organic solvent	Spent acid Spent alkali Spent halogenated solvent Spent non-halogenated solvent	T03 L48 T03 L58 T03 L49 T03 L43
3112	Dairy products					
3113	Canning, preserving of fruits and vegetables					
3114	Canning, preserving and processing of fish and crustaceans	Processing/Storage tank cleaning	T01	Acid Alkali Organic solvent	Spent acid Spent alkali Spent non-halogenated solvent	T01 L48 T01 L58 T01 L43
3115	Vegetable and imitation animal oils and fats	Cleaning of containers	C06	Sodium hydroxide	Spent alkali	C06 L58
3116	Grain mill products					
3117	Bakery products	Process in common with printing industry (342)			(Waste streams typical to printing industry)	
3118	Vermicelli, noodles and similar farinaceous products					
3121	Sugar factories and refineries					
3122	Cocoa, chocolate and sugar confectionery					
3123	Prepared animal feeds					
3129	Food products, n.e.c.					
3131	Distilling, rectifying and blending spirits					
3132	Breweries and manufacture of malt liquors and malt					
323 LEATHER AND LEATHER PRODUCTS, EXCEPT FOOTWEAR AND WEARING APPAREL						
3231	Tanneries and Leather Finishing	Dry cleaning	D05	Organic solvent	Spent halogenated solvent	D05 L49
3232	Products of leather and leather substitutes, except footwear and wearing apparel	Solvent cleaning	C06	Organic solvent	Sludge containing halogenated solvent Spent halogenated solvent	D05 M49 C06 L49
3233	Handbags (excl. rattan handbag, straw handbag, plastic shopping bags)	Liming	L03	Calcium hydroxide, sodium sulphide	Spent alkaline slurry	L03 M58
		Acid pickling	A04	Sulphuric acid	Spent acid	A04 L48
		Chrome tanning	T02	Chromium compound, bicarbonate	Spent solution containing chromium Sludge containing chromium	T02 L66 T02 M66
		Retanning	R03	Chromium compound, bicarbonate	Spent solution containing chromium Sludge containing chromium	R03 L66 R03 M66
		Lacquer coating	C32	Thinner, lacquer	Surplus lacquer	C32 M53
		Paint spraying	P01	Paint, organic solvent	Surplus paint	P01 M53
		Shaving and cutting	S07		Chromium containing tannery offcuts	S07 S56
324 FOOTWEAR, EXCEPT RUBBER, PLASTIC AND WOODEN FOOTWEAR						
3240	Footwear, except rubber, plastic and wooden footwear	Adhesive application	A06	Organic solvent, adhesive	Surplus flammable adhesive	A06 M33

(n.e.c.= not elsewhere classified)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
328 TEXTILES						
3281	Bleaching and dyeing	Chemical testing	T03	Acid Alkali Organic solvent	Spent acid Spent alkali Spent halogenated solvent Spent non-halogenated solvent	T03 L48
3282	Textile stencilling and printing		S01	Sodium hydroxide Organic solvent	Spent alkali Spent halogenated solvent Spent non-halogenated solvent	T03 L58
3283	Textile finishing, n.e.c.	Scouring/Kiering	C06	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	T03 L49
		Solvent cleaning	M04	Sodium hydroxide	Spent alkali	C06 L43
		Mercerization	A02	Sulphuric acid	Spent acid (Waste streams typical to printing industry)	C06 L49
		Acid carbonizing Process in common with printing industry (342)				A02 L43
341 PAPER AND PAPER PRODUCTS						
3412	Containers and boxes of paper and paperboard	Chemical testing	T03	Acid Alkali Organic solvent	Spent acid Spent alkali Spent halogenated solvent Spent non-halogenated solvent	T03 L48
3419	Articles of pulp, paper and paperboard n.e.c.	Surface coating	C32	Mineral pigments, binder, defoaming agent	Spent coating solution containing heavy metals (Waste streams typical to printing industry)	T03 L58
		Process in common with printing industry (342)				T03 L49
						T03 L43
342 PRINTING, PUBLISHING AND ALLIED INDUSTRIES						
3421	Newspaper printing	Film developing	P31	Developer, hydroxide	Spent alkaline developer	P31 L58
3422	Job printing		P32	Metabisulphite, acetic acid	Spent acidic solution containing silver	P32 L66
3429	Printing, publishing and allied industries, n.e.c.	Film fixing	P35	Potassium ferricyanide, thiosulphate	Spent solution containing silver	P35 L66
		Photographic reduction (bleaching)	P33	Developer, mercury compound	Spent solution containing mercury	P33 L66
		Photographic intensification (physical deposition)	P34	Developer/Ammonia, mercuric chloride	Spent solution containing mercury	P34 L66
		Photographic intensification (oxidation)	C34	Dichromated colloids Organic solvent, binder	Surplus chemicals containing chromium Surplus materials with solvent	C34 L66
		Swirl coating of resist (photo-resist, etch-resist, etc)	P03	Developer	Spent alkaline solution	C34 L33
		Pattern developing of etch resist	C04	Chromium compounds	Spent solution containing chromium	P03 L58
		Chemical hardening of etch resist	E31	Acid/Ferric chloride	Spent copper etchant	C04 L66
		Etching of copper plate	E34	Acid	Spent etchant	E31 L76
		Etching of metal plate	P03	Developer	Spent developer	E34 L66
		Offset printing plate developing				P03 L58

(n.e.c.= not elsewhere classified)

APPENDIX B (II)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
		Flexographic plate etching Etch-resist removal Chromium plating Cleaning of printing plates, printing rollers, tools etc Gravure printing Letterpress printing Rotary printing Silk screen printing Other printing methods	E36 S31 P42 C06 P71 P72 P74 P75 P80	Organic solvent Alkali Acid, chromic acid Gasoline, kerosene Organic solvent Organic solvent, ink Fountain solution	Spent halogenated solvent Spent non-halogenated solvent Spent alkaline solution Spent chromic acid solution Spent flammable liquids Spent halogenated solvent Spent non-halogenated solvent Surplus flammable ink slurry Spent fountain solution from offset printing # P_ refers to the corresponding process code on the left column	E36 L49 E36 L43 S31 L58 P42 L78 C06 L33 C06 L49 C06 L43 #P_ M33 #P_ L33
351-2 CHEMICALS AND CHEMICAL PRODUCTS						
3511	Basic industrial chemicals except fertilizers	Compounding of industrial Chemicals (e.g. dyes, pigments, pesticides, plating chemicals, paints, varnishes, etc.)	M05	Acid, Alkali, Organic solvent,	Mixing residue containing acid	M05 L48
3512	Fertilizers and pesticides				Mixing residue containing alkali	M05 L58
3513	Synthetic resins, plastic materials and synthetic fibres except glass				Mixing residue containing halogenated solvent	M05 L49
3521	Paints, varnishes and lacquers				Mixing residue containing non-halogenated solvent	M05 L43
3522	Drugs and medicines				Mixing residue containing pesticides defined in Section 4(b) of Cap.133	M05 L06
3523	Soap and cleaning preparations, perfumes, cosmetics and other toilet preparations				Mixing residue containing pesticides defined in Section 4(a) of Cap.133	M05 L46
3524	Candles				Mixing residue containing heavy metals	M05 L66
3529	Chemical products, n.e.c.	Cleaning of scrap plastics Polymerisation of plastic monomer Screening of milled pigment (paint preparations) Chemical synthesis (alkylation, esterification, cyclisation, sulphonation, etc) Solvent extraction Distillation Filling/Packaging of pharmaceutical products	C06 P07 S02 C05 S16 D04 F02	Sodium hydroxide Monomer, organic solvent, catalyst Organic and inorganic Chemicals (Organic solvents, toxic and corrosive materials, pharmaceutical ingredients, etc.) Organic solvent Pharmaceutical ingredients	Spent alkali Unreacted monomer/ intermediate Spent halogenated solvent Spent non-halogenated solvent Tarry material Spent catalyst containing heavy metals Screened residue containing heavy metals Reactor residue containing chemicals under Schedule 1 Spent halogenated solvent Spent non-halogenated solvent Distillation residue containing chemicals under Schedule 1 Contaminated spillages	C06 L58 P07 L33 P07 L49 P07 L43 P07 M43 P07 S66 S02 S66 C05 * S16 L49 S16 L43 D04 * F02 L40

* Refer to remarks on page B-20
(n.e.c.= not elsewhere classified)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
		Preparation of toilet and cleaning products (including cosmetics & perfumes)	M05	Acid Alkali Hypochlorite Organic solvent	Mixing residue containing acid Mixing residue containing alkali Mixing residue containing hypochlorite Mixing residue containing non-halogenated solvent	M05 L48 M05 L58 M05 L88 M05 L43
354 PRODUCTS OF PETROLEUM AND COAL						
3540	Miscellaneous products of petroleum and coal	Tank cleaning	T01	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	T01 L49 T01 L43
		Chemical testing	T03	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	T03 L49 T03 L43
		Cleaning of petrol interceptor	C06	Mineral oil	Spent mineral oil	C06 L63
355 RUBBER PRODUCTS						
3551	Tyre retreading and manufacture of rubber tube	Compounding	M05	Mineral pigment, additives	Mixing residues containing heavy metals	M05 L66
3552	Rubber footwear	Antitack coating	C32	Lead stearate	Spent antitack agent	C32 L66
3553	Rubber toys	Solvent cleaning	C06	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	C06 L49 C06 L43
3559	Rubber products, n.e.c.	Process in common with mould making (3871)			(Waste streams typical to mould making)	
356 PLASTIC PRODUCTS						
3561	Plastic flowers and foliage	Fabric application	F01	Organic solvent, binder	Spent halogenated solvent	F01 L49
3562	Plastic toys	(e.g. fibre glass coating)			Spent non-halogenated solvent	F01 L43
3569	Plastic products, n.e.c.	Paint spraying	P01	Organic solvent, paint	Surplus paint	P01 M53
		Paint stripping	S34	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	S34 L49 S34 L43

* Refer to remarks on page B-20
(n.e.c.= not elsewhere classified)

APPENDIX B (II)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
		Solvent cleaning Processes in common with printing industry (342) and mould making (3871)	C06	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent (Waste streams typical to printing industry and mould making)	C06 L49 C06 L43
362 NON-METALLIC MINERAL PRODUCTS, EXCEPT PRODUCTS OF PETROLEUM AND COAL						
3620	Glass and glass products (except spectacles, optical lenses)	Polishing Glass etching Resist stripping Cleaning Sensitizing Metallizing (silver coating) Metallizing (copper coating) Protective layer coating	P06 E33 S31 C06 S06 C03 C03 C40	Polishing oil/Coolant Glass etchant Organic solvent Alkaline cleaner Organic solvent Stannous chloride Silver nitrate, alkali, formalin Copper sulphate, reducing agent Coating paint, organic solvent	Spent mineral oil Spent glass etchant Spent halogenated solvent Spent non-halogenated solvent Spent alkaline solution Spent halogenated solvent Spent non-halogenated solvent Spent solution containing heavy metals Spent solution containing heavy metals Spent solution containing heavy metals Surplus paint	P06 L63 E33 L48 S31 L49 S31 L43 C06 L58 C06 L49 C06 L43 S06 L66 C03 L66 C03 L66 C40 M53
371-2 BASIC METAL INDUSTRIES						
3710	Iron and steel basic industries	Smelting and casting Metal rolling Alkaline degreasing Acid pickling Sensitizing	C60 R05 D33 A04 S06	Alloying elements, flux Rolling oil/Coolant Sodium hydroxide Acid Zinc chloride, ammonium chloride	Casting slag containing heavy metals Spent mineral oil Bottom sludge containing mineral oil Spent alkali Bottom sludge containing mineral oil Spent acid Bottom sludge with metallic oxides Spent solution containing zinc	C60 S66 R05 L63 R05 M63 D33 L58 D33 M63 A04 L48 A04 M66 S06 L66
3721	Non-ferrous metal basic industries, copper	Smelting and casting Metal rolling Alkaline degreasing Desmutting Acid pickling Bright dipping	C60 R05 D33 D02 A04 B02	Alloying elements, flux Rolling oil/Coolant Alkaline solution Acid, dichromate Sulphuric acid Hydrochloric acid	Casting slag containing heavy metals Spent mineral oil Bottom sludge containing mineral oil Spent alkaline solution Spent chromic acid solution Spent acid Spent acid	C60 S66 R05 L63 R05 M63 D33 L58 D02 L78 A04 L48 B02 L48
(n.e.c.= not elsewhere classified)						

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
3722	Non-ferrous metal basic industries, aluminium	Smelting and casting Alkaline degreasing Solvent degreasing Desmutting Anodizing Other process in common with electroplating industry (3818)	C60 D33 D33 D02 A08	Alloying elements, flux Alkali Organic solvent Acid, dichromate Sulphuric acid Chromic acid mixture	Casting slag containing heavy metals Spent alkaline solution Spent halogenated solvent Spent non-halogenated solvent Spent chromic acid solution Spent acid Spent chromic acid solution (Waste streams typical to electroplating industry)	C60 S66 D33 L58 D33 L49 D33 L43 D02 L78 A08 L48 A08 L78
3723	Non-ferrous metal basic industries, n.e.c.	Smelting and casting Metal rolling Precipitation of precious metals Electrolytic extraction of precious metals Recycling of batteries Recycling of tin, solder	C60 R05 P08 E02 Z00 Z00	Alloying elements, flux Rolling oil/Coolant Sodium hydroxide, zinc powder Ferrous salt Residual acidic solution Residual alkaline solution Waste battery	Casting slag containing heavy metals Spent mineral oil Bottom sludge containing mineral oil Spent alkaline filtrate containing heavy metals Spent acidic filtrate Acidic electrolyte Alkaline electrolyte Scrap cathode or anode containing heavy metal compounds Waste mineral oil	C60 S66 R05 L63 R05 M63 P08 L66 P08 L48 E02 L48 E02 L58 Z00 L48 Z00 L58 Z00 S66 Z00 L63
380-1 FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT						
3801	Metal toys	Acid pickling	A04	Acid	Spent acid	A04 L48
3802	Nails, screws and hinges					
3803	Cans and domestic utensils of metal, except aluminium	Dewaxing	D03	Alkaline cleaner	Spent alkaline solution	D03 L58
3804	Vacuum flasks	Alkaline degreasing	D33	Alkali	Spent alkaline solution	D33 L58
3810	Cutlery			Cyanide	Spent solution containing	D33 L96
3811	Hand tools and general					
3812	Furniture and fixtures, primarily of metal	Electrodegreasing	D32	Acid Alkali Cyanide	Spent acidic solution Spent alkaline solution Spent solution containing	D32 L48 D32 L58 D32 L96
3813	Structural metal products					
3814	Aluminium wares					
3815	Pressure & kerosene stoves and lanterns and accessories	Solvent degreasing, soaking	D33	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	D33 L49 D33 L43
3816	Torches, lamps and parts except torch bulbs	Vapour degreasing	D34	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	D34 L49 D34 L43
3817	Metal wrist watchbands					
3819	Fabricated metal products, except machinery and equipment, n.e.c.	Metal surface sensitizing Phosphating Lacquer coating Surface hardening, cyaniding	S06 C45 C32 S20	Acid Phosphoric acid Organic polymer Cyanide	Spent acid Spent acid Spent solution containing halogenated organics Spent cyanide bath	S06 L48 C45 L48 C32 L49 S20 L96

(n.e.c.= not elsewhere classified)

APPENDIX B (II)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
		Surface hardening, oil quenching Paint spraying Paint stripping Electropolishing Mechanical machining Metal parts cleaning Process in common with printing (342) and electroplating (3818) industries	S21 P01 S34 P05 M03 C06	Quenching oil Paint, organic solvent Organic solvent Sulphuric acid, nitric acid Cutting oil/cutting Kerosene, diesel, etc.	Spent mineral oil Surplus paint Spent halogenated solvent Spent non-halogenated solvent Spent acid Spent mineral oil Spent flammable liquid (Waste streams typical to printing and electroplating industries)	S21 L63 P01 M53 S34 L49 S34 L43 P05 L48 M03 L63 C06 L33
3818	Buffing, polishing and electroplating	Acid pickling Desmutting Dewaxing Barrel degreasing Alkaline degreasing Electrodegreasing Solvent degreasing Cyanide dipping Acid dipping Cadmium plating Chromium plating Black chromium plating Copper plating Gold plating Lacquer plating Nickel plating Black nickel plating Palladium plating Palladium nickel plating Rhodium plating Silver plating Tin plating Tin-cobalt plating Bronze plating (tin-copper) Solder plating (tin-lead) Tin-nickel plating Zinc plating Brass plating (zinc-copper) Other plating, n.e.s. Renewal of filter cartridge from plating baths	A04 D02 D03 D31 D33 D32 D33 D53 D51 P41 P42 P43 P44 P46 P47 P48 P49 P51 P52 P53 P54 P55 P56 P57 P58 P59 P60 P61 P70 F03	Acid Acid Alkaline cleaner Degreasing agent, cyanide Alkali Cyanide Acid Alkali Cyanide Organic solvent Cyanide Acid Plating chemicals	Spent acid Spent acid Spent alkaline solution Spent solution containing cyanide Spent alkaline solution Spent solution containing cyanide Spent acidic solution Spent alkaline solution Spent solution containing cyanide Spent halogenated solvent Spent non-halogenated solvent Spent cyanide solution Spent acid Spent chromic acid bath in chromium plating Spent plating bath containing heavy metals Spent plating bath containing cyanide Spent plating bath containing non-halogenated organics Plating bath sludge containing heavy metals # P_ refers to the corresponding process code on the left column Filter cartridge containing heavy metals	A04 L48 D02 L48 D03 L58 D31 L96 D33 L58 D33 L96 D32 L48 D32 L58 D32 L96 D33 L49 D33 L43 D53 L96 D51 L48 P42 L78 #P_ L66 #P_ L96 #P_ L43 #P_ M66 # P_ refers to the corresponding process code on the left column F03 S66

(n.e.c.= not elsewhere classified)

APPENDIX B (II)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
		Electropolishing	P05	Sulphuric acid, nitric acid	Spent acid	P05 L48
		Passivation	C44	Nitric acid	Spent acid	C44 L48
		Bright dipping	D51	Acid	Spent acid	D51 L48
		Bronze dipping	C42	Acid	Spent acid	C42 L48
		Lacquer coating	C32	Organic compounds	Spent bath containing halogenated organic compounds	C32 L49
		Sulphide dipping (Antique finish)	C41	Potassium polysulphides	Spent bath containing sulphide	C41 L98
		Phosphating	C45	Phosphoric acid	Spent acid	C45 L48
		Reject/Rack stripping	S33	Nitric acid Cyanide, oxidizing agent	Spent acid Spent solution containing cyanide	S33 L48 S33 L96
		Plate/strip-resist stripping	S31	Alkali Organic solvent	Spent alkaline solution Spent halogenated solvent Spent non-halogenated solvent	S31 L58 S31 L49 S31 L43
		Oxide etching for anodizing	E35	Alkali Acid, chromic acid	Spent alkali Spent chromic acid solution	E35 L58 E35 L78
		Anodizing	A08	Sulphuric acid Chromic acid mixture	Spent acid Spent chromic acid solution	A08 L48 A08 L78
		Pigment colouring of anodized layer	C07	Metal salt	Spent solution containing heavy metals	C07 L66
		Electrolytic colouring of anodized layer	C08	Metal salt	Spent solution containing heavy metals	C08 L66
		Sealing after anodizing	S04	Metal salt	Spent solution containing heavy metals	S04 L66
		Paint spraying	P01	Paint, organic solvent	Surplus paint	P01 M53
		Paint application	P02	Paint, organic solvent	Surplus paint	P02 M53
		Paint stripping	S34	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	S34 L49 S34 L43
		Surface roughening (plastic)	S22	Chromic acid	Spent chromic acid solution	S22 L78
		Activation for electroless plating	A05	Palladium and tin salt	Spent solution containing heavy metals	A05 L66
		Acceleration for electroless plating	A01	Acid	Spent acid	A01 L48
		Electroless nickel plating	P50	Plating chemicals	Spent plating bath containing nickel	P50 L66
		Electroless copper plating	P45		Spent plating bath containing copper Plating bath sludge containing nickel Plating bath sludge containing copper	P45 L66 P50 M66 P45 M66
		Vacuum plating	V01	Metallic compounds	Non-volatile residue containing heavy metals	V01 S66

(n.e.c.= not elsewhere classified)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
382 OFFICE, ACCOUNTING AND COMPUTING MACHINERY						
3821	Office machinery and equipment, except computing and accounting machinery	Solvent cleaning	C06	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	C06 L49 C06 L43
3822	Computing machinery and equipment	Solder flux application	S12	Flux, organic solvent	Spent halogenated solvent with solder flux Spent non-halogenated solvent with solder flux	S12 L49 S12 L43
		Soldering	S15	Solder & flux, tinning oil	Spent mineral oil with solder flux	S15 L63
		Vapour degreasing	D34	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	D34 L49 D34 L43
383 RADIO, TELEVISION AND COMMUNICATION EQUIPMENT AND APPARATUS						
3831	Transistorized radios	Solvent cleaning	C06	Organic solvent	Spent halogenated solvent	C06 L49
3832	Television receivers and communication equipment				Spent non-halogenated solvent	C06 L43
3833	Sound reproducing and equipment and apparatus	Solder flux application	S12	Flux, organic solvent	Spent halogenated solvent with solder flux	S12 L49
3834	Records and magnetic tapes				Spent non-halogenated solvent with solder flux	S12 L43
		Soldering	S15	Solder & flux, tinning oil	Spent mineral oil with solder flux	S15 L63
		Vapour degreasing	D34	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	D34 L49 D34 L43
384 ELECTRONIC PARTS AND COMPONENTS						
3840	Electronic parts and components	Alkaline cleaning	C06	Alkali	Spent alkaline solution	C06 L58
		Electrodegreasing	D32	Acid	Spent acid	D32 L48
		Solvent degreasing	D33	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	D33 L49 D33 L43
		Acid pickling	A04	Acid	Spent acid	A04 L48
		Screen printing	P75	Ink, organic solvent	Surplus ink containing halogenated solvent Surplus ink containing non-halogenated solvent Surplus ink containing heavy metals	P75 M49 P75 M43 P75 M66
		Pattern developing	P03	Alkali Organic solvent	Spent alkaline solution Spent halogenated solvent Spent non-halogenated solvent	P03 L58 P03 L49 P03 L43
		Copper etching	E31	Copper etchant	Spent copper etchant	E31 L76
		Plate/Etch resist removal	S31	Alkali Organic solvent	Spent alkali Spent halogenated solvent Spent non-halogenated solvent	S31 L58 S31 L49 S31 L43
		Surface sensitizing before activation	S06	Acid	Spent acid	S06 L48
		Activation	A05	Palladium and tin salt	Spent solution containing heavy metals	A05 L66
		Acceleration	A01	Acid	Spent acid	A01 L48

(n.e.c.= not elsewhere classified)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
		Electroless copper plating	P45	Plating chemicals	Spent plating bath containing heavy metals Plating bath sludge containing heavy metals	P45 L66 P45 M66
		Solder mask application	S13	Heat resistant polymer, organic solvent	Surplus polymeric slurry containing flammable substances	S13 M33
		Hot air levelling	D54	Solder, tinning oil	Spent mineral oil	D54 L63
		Solder flux application	S12	Flux, organic solvent	Spent halogenated solvent with solder flux Spent non-halogenated solvent with solder flux	S12 L49 S12 L43
		Soldering	S15	Solder, flux, tinning oil	Spent mineral oil with solder flux	S15 L63
		Vapour degreasing	D34	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	D34 L49 D34 L43
		Black oxide treatment	O02	Acid	Spent acid	O02 L48
		Smear removal	S09	Chromic acid Potassium permanganate	Spent solution containing chromium Spent solution containing manganese	S09 L78 S09 L66
		Etch -back	E03	Glass etchant	Spent acid	E03 L48
		Tin-lead (solder) stripping	S33	Fluoroboric acid	Spent acid	S33 L48
		Solder brightening	S11	Acid	Spent acid	S11 L48
		Reject/Rack stripping	S33	Nitric acid Cyanide	Spent acid Spent solution containing cyanide	S33 L48 S33 L96
		Photosensitive material coating	C34	Photoresist, organic solvent	Surplus halogenated solvent with photosensitive material Surplus non-halogenated solvent with photosensitive material	C34 L49 C34 L43
		Oxide etching in LCD/IC production	E35	Acid/Glass etchant	Spent acid	E35 L48
		Coating of LCD plate	C34	Organic solvent, polyimide	Surplus material containing halogenated solvent Surplus material containing non-halogenated solvent	C34 L49 C34 L43
		Filling of liquid crystal	F02	Liquid crystal	Surplus flammable organic material	F02 M33
		Solvent cleaning	C06	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	C06 L49 C06 L43
		Film developing	P31	Developer, hydroxide	Spent alkaline developer	P31 L58
		Film fixing	P32	Metabisulphite, acetic acid	Spent acidic solution containing silver	P32 L58
		Sorting of unwanted, rejected or damaged printed circuit board	Z00	Waste printed circuit board	Waste containing heavy metals	Z00 S66
		Process in common with electroplating industry (3818)			(Waste streams typical to electroplating industry)	

(n.e.c.= not elsewhere classified)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
385 ELECTRICAL APPLIANCES AND HOUSEWARE AND ELECTRONIC TOYS						
3851	Electrical appliances and houseware	Paint spraying Paint stripping Solvent cleaning Vapour degreasing Process in common with plastic (356) and plating (3818) industries	P01 S34 C06 D34	Paint, organic solvent Organic solvent Organic solvent Organic solvent	Surplus paint Spent halogenated solvent Spent non-halogenated solvent Spent halogenated solvent Spent non-halogenated solvent Spent halogenated solvent Spent non-halogenated solvent (Waste streams typical to plastic and electroplating industries)	P01 M53 S34 L49 S34 L43 C06 L49 C06 L43 D34 L49 D34 L43
3852	Electronic toys	Metal parts cleaning Solvent cleaning Soldering Vapour degreasing Process in common with plastic (356) and plating (3818) industries	C06 C06 S15 D34	Acid Alkali Organic solvent Flux, tinning oil, solder Organic solvent	Spent acid Spent alkali Spent halogenated solvent Spent non-halogenated solvent Spent mineral oil with solder flux Spent halogenated solvent Spent non-halogenated solvent (Waste streams typical to plastic and electroplating industries)	C06 L48 C06 L58 C06 L49 C06 L43 S15 L63 D34 L49 D34 L43
386-7 MACHINERY, EQUIPMENT, APPARATUS, PARTS AND COMPONENTS, n.e.c.						
3861	Engines and turbines	Surface hardening, cyaniding	S20	Cyanide	Spent solution containing cyanide	S20 L96
3862	Agricultural machinery and equipment	Surface hardening, oil quenching	S21	Quenching oil	Spent mineral oil	S21 L63
3863	Metal and wood working machinery					
3864	Special industrial machinery and equipment except metal and wood working machinery	Metal parts cleaning	C06	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	C06 L49 C06 L43
3865	Industrial machinery and apparatus for the generation of electricity			Kerosene, diesel, etc.	Spent flammable liquid	C06 L33
3866	Dry batteries (excluding lead accumulators)	Mixing of anode materials Mixing of cathode materials Electrolyte preparation Metal parts cleaning Vapour degreasing Process in common with printing (342) and electroplating (3818) industries	M05 M05 M05 C06 D34	Heavy metal compounds Heavy metal compounds Hydroxide Organic solvent Kerosene, diesel, etc. Organic solvent	Mixing residue containing heavy metals Mixing residue containing heavy metals Surplus alkali Spent halogenated solvent Spent non-halogenated solvent Spent flammable liquid Spent halogenated solvent Spent non-halogenated solvent (Waste streams typical to printing and electroplating industries)	M05 S66 M05 S66 M05 L58 C06 L49 C06 L43 C06 L33 D34 L49 D34 L43
(n.e.c.= not elsewhere classified)						

APPENDIX B (II)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
3867	Electric and torch bulbs and tubes	Paint spraying Paint stripping Glass etching Etch-resist stripping Screen printing	P01 S34 E33 S31 P75	Paint, organic solvent Organic solvent Glass etchant Organic solvent Ink, organic solvent	Surplus paint Spent halogenated solvent Spent non-halogenated solvent Spent acid Spent halogenated solvent Spent non-halogenated solvent Surplus ink containing heavy metals	P01 M53 S34 L49 S34 L43 E33 L48 S31 L49 S31 L43 P75 M66
3871	Machinery and equipment except electrical, n.e.c.	Bronzing Metallizing Electrochemical machining Electrical discharge machining Mechanical machining Process in common with electroplating industry (3818)	C42 C42 M02 M01 M03	Silver cyanide Silver nitrate, alkali, formalin Electrolyte Electrolyte Cooling oil Cutting oil/Cutting fluid	Spent solution containing cyanide Spent solution containing silver Spent electrolyte containing heavy metals Spent electrolyte containing heavy metals Spent mineral oil Spent mineral oil (Waste streams typical to electroplating industry)	C42 L96 C42 L66 M02 L66 M01 L66 M01 L63 M03 L63
3868	Electronic industrial apparatus	Metal spraying	S18	Conductive metal	Residues containing metallic oxides	S18 M66
3872	Electrical products and accessories, n.e.c.	Process in common with electronic toys production (3852)			(Waste streams typical to electronic toys production)	
3873	Electronic products, n.e.c.					
388 TRANSPORT EQUIPMENT						
3881	Shipyards	Boiler cleaning for vessels	T01	Acid	Spent acid	T01 L48
3882	Boatyards	Maintenance of insulation pipings	M33		Asbestos waste	M33 S09
3883	Railroad equipment					
3884	Motor vehicles	Surface hardening, cyaniding	S20	Cyanide	Spent solution containing cyanide	S20 L96
3885	Motor-cycles and bicycles					
3886	Aircraft	Surface hardening, oil quenching	S21	Quenching oil	Spent mineral oil	S21 L63
3888	Motor vehicle breaking					
3889	Transport equipment, n.e.c.	Replacement of lubricating, hydraulic, or cooling oils Decarbonization Metal parts/engine cleaning Paint spraying Paint stripping Mechanical machining Maintenance of brake / clutch linings	O01 D01 C06 P01 S34 	Lubricating oil Hydraulic oil Cooling oil Organic solvent Organic solvent Kerosene, diesel, etc. Paint, organic solvent Organic solvent Cutting oil/Cutting fluid	Spent lubricating oil Spent mineral oil Spent mineral oil Spent halogenated solvent Spent halogenated solvent Spent non-halogenated solvent Spent flammable liquid Surplus paint Spent halogenated solvent Spent non-halogenated solvent Spent mineral oil Asbestos waste	O01 L73 O01 L63 O01 L63 D01 L49 C06 L49 C06 L43 C06 L33 P01 M53 S34 L49 S34 L43 M03 L63 M32 S09

(n.e.c.= not elsewhere classified)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
		Battery replacement or recharging Process in common with electroplating industry (3818)	Z00		Spent acidic electrolyte Spent battery parts containing heavy metals (Waste streams typical to electroplating industry)	Z00 L48 Z00 S66
389 PROFESSIONAL AND SCIENTIFIC, MEASURING AND CONTROLLING EQUIPMENT, n.e.c. AND PHOTOGRAPHIC AND OPTICAL GOODS						
3891	Photographic and optical goods	Lens polishing	P06	Polishing oil	Spent mineral oil Sludge containing mineral oil	P06 L63 P06 M63
		Alkaline degreasing	D33	Alkali	Spent alkaline solution	D33 L58
		Solvent cleaning	C06	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	C06 L49 C06 L43
		Vapour degreasing	D34	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	D34 L49 D34 L43
		Mask painting	P02	Masking paint, organic solvent	Surplus paint	P02 M53
		Mask stripping	S35	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	S35 L49 S35 L43
3892	Watches and clocks, mechanical Watches and clocks, electronic	Solvent cleaning	C06	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	C06 L49
3893		Process in common with electroplating industry (3818)			(Waste streams typical to electroplating industry)	C06 L43
3899	Professional & scientific, and measuring and controlling equipment, n.e.c.	Metal parts cleaning Vapour degreasing Paint spraying Paint stripping Lens polishing Solvent cleaning Process in common with electroplating (3818) industry	C06 D34 P01 S34 P06 C06	Organic solvent Kerosene, diesel, etc. Organic solvent Paint, organic solvent Organic solvent Polishing oil Organic solvent	Spent halogenated solvent Spent non-halogenated solvent Spent flammable liquid Spent halogenated solvent Spent non-halogenated solvent Surplus paint Spent halogenated solvent Spent non-halogenated solvent Spent mineral oil Sludge containing mineral oil Spent halogenated solvent Spent non-halogenated solvent (Waste streams typical to electroplating industry)	C06 L49 C06 L43 C06 L33 D34 L49 D34 L43 P01 M53 S34 L49 S34 L43 P06 L63 P06 M63 C06 L49 C06 L43

(n.e.c.= not elsewhere classified)

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SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
390-1 MANUFACTURING INDUSTRIES, n.e.c.						
3901	Toys, n.e.c.	Process in common with plastic products (356); fabricated metal products, except machinery and equipment (380-1); and electrical appliances & houseware and electronic toys (385) industries			(Waste streams typical to plastic products industries; fabricated metal products, except machinery and equipment; and electrical appliances & houseware and electronic toys)	
3903	Musical instruments					
3904	Sporting and athletic goods					
3905	Wig and hair products					
3906	Bakelite wares	Compounding Process in common with mould making (3871)	M05	Pigments, additives	Mixing residue containing heavy metals (Waste streams typical to mould making)	M05 S66
3902	Jewellery and related articles	Colouring	C07	Pigments	Spent solution containing heavy metals	C07 L66
3907	Artificial pearls and imitation jewellery	Chemical polishing Acid cleaning Sealing wax stripping Fire assay Process in common with plastic products (356); non-ferrous basic metals, n.e.c. (3723); fabricated metal products, except machinery and equipment (380-1); electroplating (3818) industries	P04 C06 S40 I02	Cyanide, hydrogen peroxide Acid Organic solvent Lead foil	Spent solution containing cyanide Spent acid Spent non-halogenated solvent Spent cupel containing lead compounds (Waste streams typical to plastic products industries; non-ferrous basic metals, n.e.c.; fabricated metal products, except machinery and equipment; and electroplating)	P04 L96 C06 L48 S40 L43 I02 S66
3908	Buttons	Compounding Process in common with electroplating industry (3818)	M05	Pigments, additives	Mixing residue containing heavy metals (Waste streams typical to electroplating industry)	M05 S66
3911	Umbrellas	Mechanical machining Paint spraying Paint stripping Process in common with electroplating industry (3818)	M03 P01 S34	Cutting oil / Cutting fluid Paint, organic solvent Organic solvent	Spent mineral oil Surplus paint Spent halogenated solvent Spent non-halogenated solvent (Waste streams typical to electroplating industry)	M03 L63 P01 M53 S34 L49 S34 L43
3919	Manufacturing industries, n.e.c.	Paint spraying Paint stripping Metal etching Solvent cleaning Process in common with printing (342) and electroplating (3818) industries	P01 S34 E34 C06	Paint, organic solvent Organic solvent Acid Organic solvent	Surplus paint Spent halogenated solvent Spent non-halogenated solvent Spent etchant containing heavy metals Spent halogenated solvent Spent non-halogenated solvent (Waste streams typical to printing and electroplating industries)	P01 M53 S34 L49 S34 L43 E34 L66 C06 L49 C06 L43

(n.e.c.= not elsewhere classified)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
411 ELECTRICITY, GAS AND STEAM						
4111	Electric light and power	Storage tank cleaning (e.g. fuel oil, lubrication oil, etc.)	T01	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent Tarry sludge	T01 L49
4112	Gas manufacture and distribution	Fuel burning	F05	Fuel, fuel additives	Residue/ash containing heavy metals	T01 L43
		Gas reforming	G02	Petrochemical, catalyst	Spent catalyst containing heavy metals Tarry materials	T01 M33 G02 S66
		Gas scrubbing	G01		Spent acidic solution	G02 M33 G01 L48
		Desulphurization	O02	Petrochemical, catalyst	Spent catalyst containing heavy metals Tarry materials	O02 S66
		Paint spraying	P01	Paint, organic solvent	Surplus paint	O02 M33 P01 M53
		Paint stripping	S34	Organic solvent	Spent halogenated solvent Spent non-halogenated solvent	S34 L49
		Oil retrofilling from maintenance of transformers	O01	Cooling oil	Spent mineral oil Spent fluid containing polychlorinated biphenyls	O01 L63
		Oil retrofilling from maintenance of vehicles, ventilation system, etc.	O01	Lubricating oil	Spent lubricating oil	O01 L29
		Metal parts cleaning	C06	Kerosene, diesel, etc.	Spent flammable liquid	O01 L73 C06 L33
		Decarbonization	D01	Halogenated solvent	Spent halogenated solvent	D01 L49
		Solvent cleaning of electrical and electronic parts	C06	Halogenated solvent	Spent halogenated solvent	C06 L49
610 WHOLESALE TRADE						
6102	Fuel	Storage tank cleaning (e.g. fuel oil, chemical, etc.)	T01	Organic solvent	Spent halogenated solvent	T01 L49
6103	Alcoholic drinks and Tobacco				Spent non-halogenated solvent	T01 L33
6105	Consumer goods				Tarry sludge	T01 M33
6108	Raw materials and semi-manufactures	Treatment of floor spills in holding tank	L01		Oily sludge	L01 M63
		Damaged, expired, rejected, scrap & unwanted chemicals or products	Z00		Waste containing chemicals under Schedule 1	Z00 *
620 RETAIL TRADE						
6202	Fuel	Storage tank cleaning (e.g. fuel oil, chemical, etc.)	T01	Organic solvent	Spent halogenated solvent	T01 L49
6203	Alcoholic drinks and tobacco				Spent non-halogenated solvent	T01 L33
6205	Consumer goods	Treatment of floor spills in holding tank	L01		Tarry sludge	T01 M33
		Lubrication services	L02	Lubricating oil	Interceptor oily sludge	L01 M63
		Damaged, expired, rejected, scrap & unwanted Chemicals, drugs, Chinese medicine or products	Z00		Oily sludge Spent lubricating oil	L02 M73
					Waste containing chemicals under Schedule 1	L02 L73 Z00 *

* Refer to remarks on page B-20
(n.e.c.= not elsewhere classified)

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SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
630 IMPORT/EXPORT TRADE						
6302	Fuel	Storage tank cleaning (e.g. fuel oil, chemical, etc.)	T01	Organic solvent	Spent halogenated solvent	T01 L49
6303	Alcoholic drinks & tobacco				Spent non-halogenated solvent	T01 L33
6305	Consumer goods				Tarry sludge	T01 M33
6308	Raw materials and semi-manufactures	Treatment of floor spills in holding tank Damaged, expired, rejected, scrap & unwanted Chemicals, drugs, Chinese medicines or products	L01 Z00		Interceptor oily sludge Waste containing chemicals under Schedule 1	L01 M63 Z00 *
710 LAND TRANSPORT						
7101	Motor buses	Oil storage tank cleaning (e.g. fuel oil, lubricating oil, etc.)	T01		Oily sludge	T01 M63
7102	Tramways and railways	Process in common with transport equipment production (388)			(Waste streams typical to transport equipment building and repairing)	
711 LAND TRANSPORT						
7118	Vehicular tunnel	Metal parts cleaning Paint spraying Paint stripping Oil retrofilling from maintenance of transformers Oil retrofilling from maintenance of vehicles, ventilation system, etc. Decarbonization Solvent cleaning of electrical and electronic parts	C06 P01 S34 O01 O01 D01 C06	Fuel oil Paint, organic solvent Organic solvent Cooling oil Lubricating oil Halogenated solvent Halogenated solvent	Spent flammable liquid Surplus paint Spent halogenated solvent Spent non-halogenated solvent Spent mineral oil Spent fluid containing polychlorinated biphenyls Spent lubricating oil Spent halogenated solvent Spent halogenated solvent	C06 L33 P01 M53 S34 L49 S34 L43 O01 L63 O01 L29 O01 L73 D01 L49 C06 L49
712 WATER TRANSPORT						
7121	Ocean and coastal water transport (excluding seamen)	Oil/chemical storage tank cleaning (e.g. fuel oil, noxious liquid, etc.)	T01	Organic solvent	Sludge containing halogenated solvent Sludge containing non-halogenated solvent	T01 M49 T01 M43
7124	Harbour ferry				Waste containing chemicals under Schedule 1	
7127	Container services					
7129	Salvaging services	Boiler cleaning Process in common with transport equipment production (388)	T01	Acid	Spent acid (Waste streams typical to transport equipment building and repairing)	T01 L48

* Refer to remarks on page B-20
(n.e.c.=not elsewhere classified)

SECTOR CODE	INDUSTRY TYPE	PROCESS	PROC CODE	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
940 MOTION PICTURE AND OTHER ENTERTAINMENT SERVICES						
9401	Film processing	Stripping of back coating	S35	Sodium sulphate, borax, sodium hydroxide	Spent alkali	S35 L58
		Film developing	P31	Developer, hydroxide	Spent alkaline solution	P31 L58
		Film fixing	P32	Metabisulphite, acetic acid	Spent acidic solution containing silver	P32 L66
		Photographic reduction (bleaching)	P35	Potassium ferricyanide, thiosulphate	Spent solution containing silver	P35 L66
		Photographic intensification (physical deposition)	P33	Developer, mercury compounds	Spent bath containing mercury	P33 L66
		Photographic intensification (oxidation)	P34	Developer/Ammonia, mercuric chloride	Spent bath containing mercury	P34 L66
		Stabilization	S19	Stabilizer / Formaldehyde	Spent stabilizer/formalin solution	S19 L36
		Sound track developing	S17	Developer	Spent alkaline solution	S17 L58
951 REPAIR SERVICES, n.e.c.						
9513	Repair of motor vehicles and motor cycles	Battery replacement or recharging	M31	Lead-acid battery	Spent battery containing heavy metals Spent acidic electrolyte (Waste streams typical to transport equipment building and repairing)	M31 S66 M31 L48
		Process in common with transport equipment production (388)				
952 LAUNDRIES, LAUNDRY SERVICES, AND CLEANING AND DYEING PLANTS						
9520	Laundries, laundry services, and cleaning and dyeing plants	Dry cleaning	D05	Perchloroethylene/ Halogenated solvent	Spent halogenated solvent Sludge containing halogenated solvent	D05 L49 D05 M49
959 MISCELLANEOUS PERSONAL SERVICES						
9592	Photographic studios, including commercial photography	Stripping of back coating	S35	Sodium sulphate, borax, sodium hydroxide	Spent alkali	S35 L58
		Film/photo developing	P31	Film/Photo developer	Spent alkaline solution	P31 L58
		Film/photo fixing	P32	Film/Photo fixer	Spent acidic solution containing silver	P32 L66
		Photographic reduction (bleaching)	P35	Potassium ferricyanide, thiosulphate	Spent solution containing silver	P35 L66
		Photographic intensification (physical deposition)	P33	Developer, mercury compounds	Spent bath containing mercury	P33 L66
		Photographic intensification (oxidation)	P34	Developer/Ammonia, mercuric chloride	Spent bath containing mercury	P34 L66
		Stabilisation	S19	Stabilizer / Formaldehyde	Spent stabilizer/formalin solution	S19 L36

(n.e.c.= not elsewhere classified)

APPENDIX B (III)

CHEMICAL WASTE STREAMS FROM WASTE TREATMENT PROCESSES

GENERAL PROCESS	PROC CODE	DESCRIPTION	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
Centrifuging	C01	Separation of different substances by centrifuge		Waste containing chemicals under Schedule 1	C01 *
Distillation / Solvent recovery	D04	Purification & separation of components by heat application		Distilled bottoms containing halogenated solvent and tarry materials Distilled bottoms containing non-halogenated solvent and tarry materials	D04 M49 D04 M43
Electrolytic extraction	E02	Electrodeposition of precious metal from waste solution		Waste acidic electrolyte	E02 L48
Resin regeneration	R02	Regeneration of ion-exchange system	Sulphuric acid/Hydrochloric acid Sodium hydroxide	Spent acid Spent alkali	R02 L48 R02 L58
Liquid separation	L01	Separation of immiscible liquid in holding tank		Mineral oil waste Halogenated solvent waste Non-halogenated solvent waste	L01 L63 L01 L49 L01 L43
Precipitation	P08	Precipitation by chemical	Acid Alkali	Spent acidic solution Spent alkaline solution Precipitate containing heavy metals Precipitate containing halogenated organic compounds	P08 L48 P08 L58 P08 M66 P08 M49
Sedimentation	S05	Separation of solid from liquid by physical settlement		Sludge containing heavy metals Sludge containing halogenated organic compounds	S05 M66 S05 M49
Skimming	S08	Removal of surface layer from a waste liquid or mixture held in a processing/storage tank		Mineral oil waste Halogenated solvent waste Non-halogenated solvent waste	S08 L63 S08 L49 S08 L43
Dewatering, centrifuge	D41	Removal of excessive water from sludge by centrifuge		Dewatered sludge containing heavy metals Dewatered sludge containing halogenated organic compounds	D41 M66 D41 M49
Dewatering, filter press	D42	Removal of excessive water from sludge by filter press		Dewatered sludge containing heavy metals Dewatered sludge containing halogenated organic compounds	D42 M66 D42 M49
Dewatering, n.e.s.	D50	Removal of excessive water from sludge by other methods not elsewhere specified		Dewatered sludge containing heavy metals Dewatered sludge containing halogenated organic compounds	D50 M66 D50 M49
Incineration	I02	Incineration of wastes Metal extraction by calcination		Incineration ash & slag containing heavy metals	I02 M66
Gas scrubbing	G01	Removal of gaseous fumes by scrubber.		Acidic waste Alkaline waste Scrubbed solution containing halogenated organic compounds Scrubbed solution containing high content of mineral oils Paint waste slurry from paint spraying	G01 L48 G01 L58 G01 L49 G01 L63 G01 M53

* Refer to remarks on page B-20

GENERAL PROCESS	PROC CODE	DESCRIPTION	TYPICAL PROCESS CHEMICAL	WASTE STREAM	WASTE CODE
Reduction	R01	Reduction of metal ions in solution	Reducing agent	Spent solution containing heavy metals	R01 L66
Adsorption	A07	Removal of metallic contaminants from solution	Activated charcoal	Spent charcoal containing heavy metals	A07 S66
Ion exchange	I03	Removal of ions from solution	Resin	Spent resin containing heavy metals	I03 S66
Cyanide destruction	C92	Destruction of cyanide in solution	Oxidizing agent		
Neutralization	N82	Neutralization of acidic or alkaline waste	Acid Alkali		
Sorting and recycling of certain WEEE items	S82	Sorting and recycling of certain electronic equipment	Flat-panel display Cathode ray tube Fluorescent lamp Waste lead-acid battery (WLAB) including WLAB from UPS Printed circuit board	Waste containing heavy metals	S82 S66
Cleansing	C06	Cleansing of petrol interceptor	Mineral oil	Mineral oil collected from petrol interceptor	C06 L63

(n.e.s.= not elsewhere specified)

REMARKS

HOW TO COMPLETE WASTE CODE DENOTED BY *

The WASTE CODE consists of the concerned PROCESS CODE and WASTE SUB-CODE.

The PROCESS CODE is shown alongside the process name whereas the WASTE SUB-CODE is described below.

Waste Sub-Code

The waste sub-code is a 3-digit alpha-numeric code. The first digit is an alphabet which denotes the physical form of the waste as follows:

- Physical State: A stands for Aerosol
 G stands for Gas in pressurised container
 L stands for Liquid
 M stands for Miscellaneous (e.g. Sludge)
 S stands for Solid

The last two digits are Arabic numeric codes (see Appendix A) denoting the nature of waste. That is to say:

Waste sub-code = Physical state + Numeric code

- Examples: L76 stands for liquid copper etchant
 M66 stands for toxic metal sludges
 S09 stands for solid asbestos waste

SAMPLE REGISTRATION FORM

Environmental Protection Department 環 境 保 護 署 Waste Disposal Ordinance (Chapter 354) 香港法例第354章廢物處置條例 Waste Disposal (Chemical Waste)(General)Regulation 廢物處置 (化學廢物) (一般)規例 Application for Registration as a Chemical Waste Producer 化學廢物產生者登記申請表			
A. Chemical Waste Producer 化學廢物產生者	Name of Applicant (English) _____ Item 1 (Chinese) _____ (申請人或機構名稱) : (英 文) _____ (中 文) _____ Business Reg. Cert. No. (if any) _____ Item 2 (商業登記證編號) : (如有者) _____ I.D. Card No. (For application made by an individual only) (身分證編號) : (倘由個人申請) _____ Item 3 Address for Correspondence (通訊地址) : _____ Item 4 Tel. No. _____ Item 5 Fax No. (電話) : _____ (圖文傳真) : _____ Item 6		
	B. Location or Premises where the waste is produced 產生廢物的地點或處所	Name of Establishment _____ Item 7 (機構名稱) : _____ Business Reg. Cert. No. (if any) _____ Item 8 (商業登記證編號) : (如有者) _____ Nature of Business _____ Item 9 (業務性質) : _____ Major chemical waste types _____ Item 10 (主要化學廢物種類) : _____ Address _____ Item 11 Tel. No. _____ Item 12 Fax No. (電話) : _____ (圖文傳真) : _____ Item 13 Contact Person (Full Name) _____ (Capacity) _____ (聯絡人) : (全名) : _____ (職位) : _____ Item 14 Item 15	
C. Declaration 聲明		I hereby certify that the particulars given above are correct and true to the best of my knowledge and belief. 據本人所知及所信，上文所開列的資料，全屬真確無訛，此證。 _____ Item 16 _____ Signature (簽名) _____ Item 18 _____ Name in block letters (正楷姓名)	
	_____ Item 17 _____ Company chop where appropriate _____ Item 19 _____ Capacity (職位) _____ Item 20 _____ Date (日期)		
<small>WARNING: Any person who knowingly or recklessly provides incorrect or misleading information or omits material particulars or information or knowingly or recklessly certifies as correct anything which is incorrect, in relation to any requirement in the regulations, commits an offence punishable with a maximum fine of \$200,000 and imprisonment for 6 months.</small>			
<small>備註：根據廢物處置(化學廢物) (一般)規例的規定，任何人士故意或罔顧後果地提供不正確或誤導資料或遺漏重要事項，又或故意或罔顧後果地證明任何不正確事項為正確，即屬違法，最高可被判罰款港幣 200,000 元及入獄 6 個月。</small>			
EPD 129		(Jan 2015)	

Application form for registration of chemical waste producer is available from the following link:
http://www.epd.gov.hk/epd/sites/default/files/epd/tc_chi/application_for_licences/applic_froms/files/epd129.pdf

Addendum to A Guide to the Registration of Chemical Waste Producers (Updated Dangerous Goods Ordinance)

Legislation related to updated regulatory system of dangerous goods

The amended Dangerous Goods Ordinance and its subsidiary legislation align the regulatory system for dangerous goods with international standards. The relevant updates are listed below:

APPENDIX A SCHEDE OF SUBSTANCES AND CHEMICALS

Part A

Repeal

“Dangerous goods, category 2, NES
Dangerous goods, category 6, NES
Dangerous goods, category 9, NES”.

Add

“Class 2 dangerous goods, NES
Class 4.2 dangerous goods, NES
Class 4.3 dangerous goods, NES”.

Part B

Repeal

“Dangerous goods, category 3, NES
Dangerous goods, category 4, NES
Dangerous goods, category 5, NES
Dangerous goods, category 7, NES
Dangerous goods, category 8, NES
Dangerous goods, category 10, NES”.

Add

“Class 3 dangerous goods, NES
Class 3A dangerous goods, NES

Class 4.1 dangerous goods, NES
Class 5.1 dangerous goods, NES
Class 5.2 dangerous goods, NES
Class 6.1 dangerous goods, NES
Class 8 dangerous goods, NES
Class 9 dangerous goods, NES".

Environmental Protection Department
March 2022

[Reviewed in March 2023 to reflect the redistributed duties in relation to the internal reorganisation of EEB (Environment Branch) and EPD.]