Class & Characteristics		Examples		
<b>1.</b> 1a	<b>Explosives</b> An explosive substance or waste is a solid or liquid that is, in itself, capable by chemical reaction of producing gas at such a temperature and pressure and at such speed as to cause damage to the surroundings (other than those specified in 1b below).	1a	Nitrate mixtures, nitro compounds, chlorate mixtures, ammunition/ detonators (excluding those for small arms use).	
1b	As in 1a but with restricted use in the manufacture or reloading of small arms cartridges; or for the storage of flares.	1b	Gunpowder, or nitro compound adapted and exclusively used for cartridges for small arms; or for flares.	
<b>2.</b> 2.1 2.1a 2.1b	<b>Gases</b> Flammable Gases LPG. Any other Gases which at 20°C and a standard pressure of 101.3 kPa: are ignitable when in a mixture of 13% or less by volume with air. This class includes aerosols containing flammable propellants if the contents include more than 45% by mass or more than 250g of flammable components.	2.1a 2.1b	LPG. Acetylene, hydrogen, methane.	
2.2	Toxic Gases Gases which are known or are presumed to be toxic or corrosive to humans because they have an $LC_{50}$ value equal to or less than 5,000 ml/m <sup>3</sup> (ppm) when tested in accordance with procedures defined in Para 6.5(c) of the United Nations Recommendations on the Transport of Dangerous Goods, 7th revised edition, or its subsequent revisions.	2.2	Chlorine, sulphur dioxide, ammonia, methyl bromide.	
2.3	<ul> <li>Non-flammable, Non-toxic Gases</li> <li>Gases which are stored or transported under a pressure not less than 280 kPa at 20°C, or as refrigerated liquids, and which:</li> <li>are asphyxiant-gases which dilute or replace the oxygen normally in the atmosphere, or</li> <li>are oxidising-gases which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does, or</li> <li>have neither asphyxiant nor oxidising characteristics.</li> </ul>	2.3	Argon, helium, oxygen, nitrogen, carbon dioxide, freons, nitrous oxide.	

## APPENDIX XV HAZARDOUS SUBSTANCES

Class & Characteristics		Examples	
3.	Flammable Liquids Liquids, or mixtures of liquids, or liquids containing solids in solution or suspension, having the following flammability limits:		
3а	Flash point <23°C	За	Petrol, adhesives, ethyl and methyl alcohols, acetone, benzene, butylamine, MIBK.
3b	Flash point 23°C; <61°C	3b	Kerosene, styrene monomer, cyclohexanone, turpentine, butyl methacrylate, chlorobenzene, ethoxyethancl.
3c	Flash point 61°C	3c	Diesel, petroleum oils.
3u	Storage of 3a, b and/or c in underground tanks.		
<b>4.</b> 4.1	Flammable Solids Flammable Solids Solids or wastes other than those classified as explosives, which under suitable conditions, i.e. impact, friction, heat, ignition, will burn or self react with extreme intensity.	4.1	Red phosphorus, ammonium picrate, picric acid, monomethyamine nitrate, nitrocellulose, trinitrobenzene, magnesium alloys.
4.2	Substances or wastes liable to spontaneous combustion Substances or wastes that are liable to spontaneous heating during transport, or heating up on contact with air, and then being liable to catch fire.	4.2	Yellow or white phosphorus, magnesium alkyls, dithionites.
4.3	Substances which in contact with water, emit flammable gases Substances or wastes which by interaction with water are liable to become spontaneously flammable or give off flammable gases in dangerous quantities.	4.3	Alkali metals e.g. sodium, potassium, lithium; calcium, magnesium, metal hydrides, metal carbides.
<b>5.</b> 5.1	Oxidising Substances Oxidising Substances Substances or wastes which, in themselves, are not necessarily combustible, but may, generally by yielding oxygen, cause or contribute to the combustion of other materials.	5.1	Chromates, bromates, chlorates, chlorites, nitrates, permanganates.
5.2	Organic Peroxides Organic substances or wastes which contain the bivalent 0=0 structure and are thermally unstable substances	5.2	Any organic peroxide (includes peroxy and per compounds). Percarbonates, butyl peroxyphthalate, cumeme

## APPENDIX XV HAZARDOUS SUBSTANCES

Class & Characteristics		Examples	
	which may undergo exothermic self- accelerating decomposition.		hydroperoxide, bezoyl peroxide.
6.	<b>Toxic Substances</b> Controlled Pesticides and Toxic Substances.	6.	Controlled Pesticides and Toxic Substances as set out in Parts A and B (respectively) of the Seventh Schedule of the Hazardous Substances and new Organisms Act 1996 (as set out at the end of this appendix).
7.	Radioactive Materials		
8.	<b>Corrosives</b> Substances or wastes which by chemical action, will cause severe damage when in contact with living tissue or, in the case of leakage, will damage or destroy other material and goods or cause other hazards.	8.	Acids such as; nitric, sulphuric, hydrochloric, hydrofluoric acids; tricholoro acetic acid. Alkalis such as; sodium, potassium and lithium hydroxides. Zinc chloride, zirconium tetrachloride, sulphur chlorides, silicon tetrachloride, phosphorus pentoxide, ferric chloride, phenolsulphonic acid, hydroxlamine sulphate, hexyl-trichlorosilane, ethanolamine.
9.	Miscellaneous		
9.1	Timber Preservatives Preservatives used in the treatment of timber.	9.1	Copper, chromium, arsenic, boron, and other water-borne preservatives. Light organic solvent preservatives, anti-sapstain chemicals.
9.2	Chlorinated Solvents	9.2	Bromodichloromethane, Trichloroethane, Chlorodibromomethane 1,1,1 - Tricholoroethene, Tetrachloroethene, Trichloromethane, Tetrachloromethane, Tribromomethane.

### APPENDIX XV HAZARDOUS SUBSTANCES

# TABLE 1: QUANTITY LIMITS FOR HAZARDOUS SUBSTANCES IDENTIFIED IN SCHEDULE 1

#### RESIDENTIAL, RESIDENTIAL CONSERVATION, PAPAKAIANGA, SMALL SETTLEMENT, AKAROA HILL SLOPES AND RURAL-RESIDENTIAL AND INDUSTRIAL (CHURCH BAY) ZONES

Schedule 1 Class	Column A	Column B
1a <sup>1</sup> - storage only	Nil	Nil
1b <sup>1</sup> - storage only	15 kg	15 kg
2	250 litres	10,000 litres
3a	50 litres <sup>2</sup>	50 litres <sup>2</sup>
3b, 3c	1200 litres	1200 litres
3u	Nil	Nil
4.1	10 kg	10 kg
4.2, 4.3	100 kg	100 kg
5.1	100 kg	100 kg
5.2	5 kg	5 kg
8	20 litres	20 litres
6	50 litres	50 litres
9.1	20 litres	20 litres
9.2	20 litres	20 litres

TOWN CENTRE, INDUSTRIAL (LYTTELTON) AND BOAT HARBOUR ZONES			
Schedule 1 Class	Column A	Column B	
1a <sup>1</sup> - storage only	25 kg	-	
1b <sup>1</sup> - storage only	50 kg	-	
2	250 litres	40,000 litres	
3a	3,000 litres	-	
3b, 3c	3,000 litres	-	
3u	20,000 litres	-	
4.1	50 kg	-	
4.2, 4.3	1,000 kg	-	
5.1	1,000 kg	-	
5.2	25 kg	-	
8	1,000 litres	-	
6	5,000 litres	-	
9.1	20 litres	-	
9.2 - Town Centre only	200 litres	-	

RURAL, RECREATION RESERVE AND LAKES ZONES			
Schedule 1 Class	Column A	Column B	
1a <sup>1</sup> - storage only	2.5 kg	-	
1b <sup>1</sup> - storage only	15 kg	-	
2	250 litres	10,000 litres	
3a	2,000 litres	-	
3b, 3c	3,000 litres	-	
3u	10,000 litres	-	
4.1	10 kg	-	
4.2, 4.3	1,000 kg	-	
5.1	1,000 kg	-	
5.2	10 kg	-	
8	1,000 kg	-	
6	1,000 kg	-	
9.1	20 litres	-	
9.2	20 litres	-	
7	'Type A' transport	100 times the 'Type A'	
'	package limits	transport package limits	

ALL ZONES			
Schedule 1 Class	Column A	Column B	
7	'Type A' transport package limits <sup>3</sup>	100 times the 'Type A' transport package limits	

### Notes

- 1. The use of high explosives is a permitted activity in all Zones but is subject to the Explosives Act and any subsequent legislation.
- 2. The 50 litre restriction does not apply to petrol and other 3a flammable liquids contained in a fuel tank of an internal combustion engine.
- 3. Transport package limits are set out in the following:
  - New Zealand Standard 5433:1988 'Code of Practice for the Transport of Hazardous Substances on Land';
  - Technical Instructions for the Safe Transport of Dangerous Goods by Air' of the International Civil Aviation Organisation (ICAO);
  - 'Dangerous Goods Code' of the International Air Transport Association (IATA)', and in particular;
  - 'Regulations for the Safe Transport of Radioactive Material' of the International Atomic Energy Agency (IAEA).
- 4. The Canterbury Regional Council requires a land use consent to use, erect, construct, place, alter, extend, remove, or demolish in, on, under or over

land, any container, or part of any container, of a volume greater than 1000 litres, for the purpose of storing, transferring, or using petroleum compounds, chlorinated hydrocarbons, brominated hydrocarbons or timber treatment chemicals (2500 litres for above ground diesel storage tanks).

- 5. The dash symbol (-) denotes no limit.
- 6. The installation of any tanks shall be subject to all relevant NZ Codes of Practice and any resource consents required by the Canterbury Regional Council.