Managing Hazardous Substances

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What is a Hazardous Substance?

- HSNO Act 1996 defines a substance as any:
  - Element/Compound (or their mixtures) of either natural or synthetic nature
  - Variation of an element or a compound
  - Any combination of the above
- Some of these substances are Dangerous Goods

What are Dangerous Goods?

- A Hazardous Substance is a DG substance if:
  - It meets specific Hazardous Substance Criteria
  - Exceeds specified ‘minimum degrees of hazard’ thresholds

Who enforces Dangerous Goods?

	Hazardous substance rules to PROTECT PEOPLE from WORKPLACE activities SET UNDER HSW ACT	Hazardous substance DISPOSAL rules and rules to protect the ENVIRONMENT in WORKPLACES* SET UNDER HSNO ACT*	Hazardous substance rules for IMPORTERS, MANUFACTURERS and SUPPLIERS** SET UNDER HSNO ACT*	Hazardous substance rules to PROTECT PEOPLE and the ENVIRONMENT in NON-WORKPLACES SET UNDER HSNO ACT*
Regulator	WORKSAFE	Environmental Protection Authority	Environmental Protection Authority	Environmental Protection Authority
Enforced by	WORKSAFE	WORKSAFE	Environmental Protection Authority	COUNCILS***

* There are other hazardous substance environmental and disposal rules set under the Resource Management Act and local council bylaws. These rules are enforced by local, district and regional councils.
** Such as labelling, packaging, safety data sheets and restrictions on ingredients in certain hazardous substances products.
*** City and district council

Hazardous Substance Criteria are

	Explosiveness Class 1		Toxicity Class 6
	Flammability (Gases) – Class 2		Radioactive Class 7
	Flammability (Liquids) – Class 3		Corrosiveness Class 8
	Flammability (Solids) – Class 4		Ecotoxicity Class 9
	Capacity to Oxidise Class 5		

Hazardous Substance Criteria are

New Zealand has moved toward the Global Harmonized System (GHS)

	Explosiveness Class 1		Toxins Class 6
	Flammable (Gases) – Class 2		Corrosiveness Class 8
	Flammability (Liquids) – Class 3		Ecotoxicity Class 9
	Flammability (Solids) – Class 4		
	Oxidizing Agents Class 5		

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GHS Pictograms

FLAMMABLE

CORROSIVE

EXPLOSIVE

COMPRESSED GAS

OXIDIZING

TOXIC

HEALTH HAZARD

HARMFUL/ IRRITANT

DANGEROUS FOR THE ENVIRONMENT

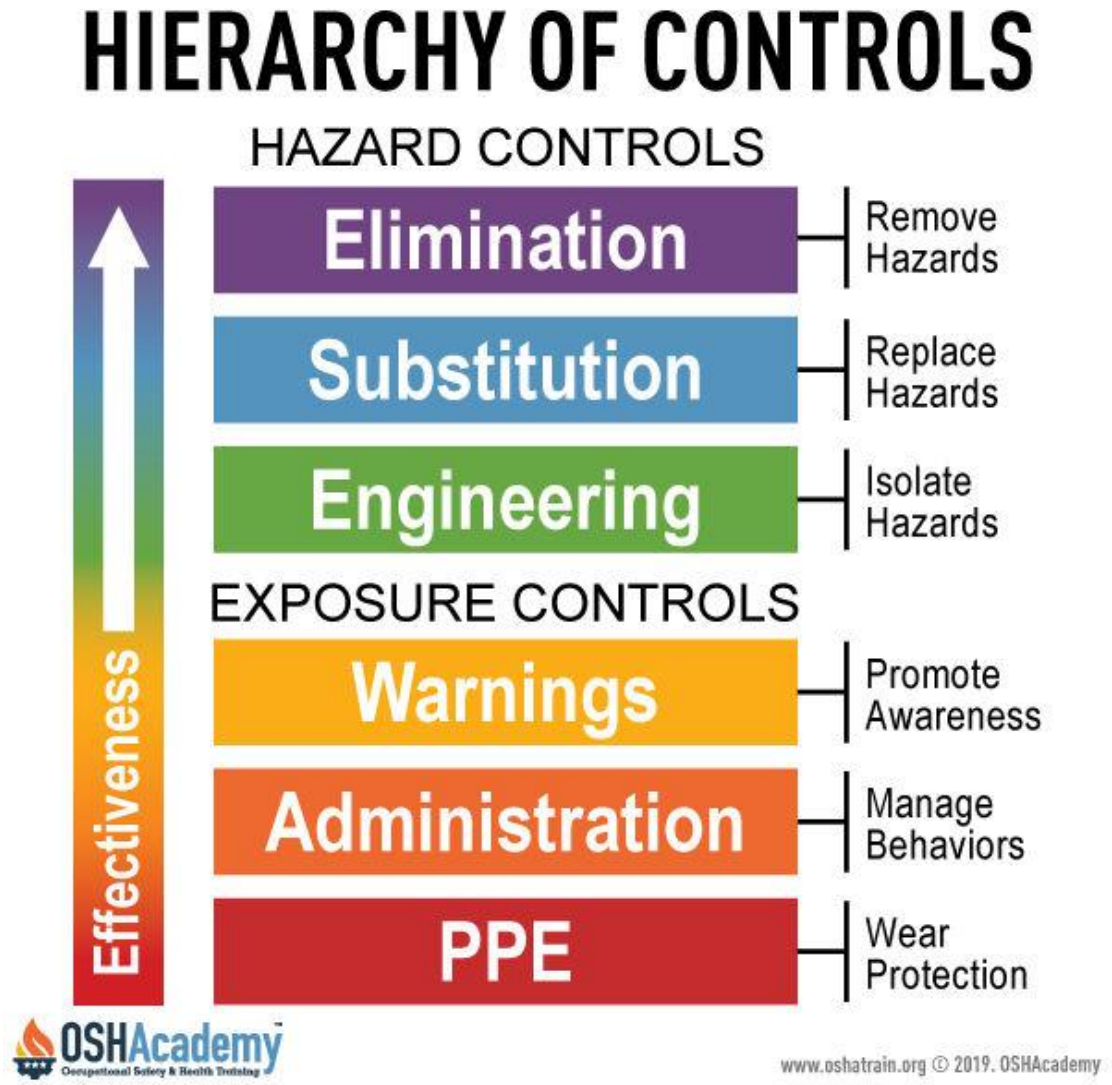
Sub -classifications

- Class category (e.g. Class 6 – Toxin) = the Hazardous Property
- Sub-class category identifies the type of hazard within the class. E.g. 6.1 = Acute Toxicity, 6.3 = skin irritant
- Letter sub-category degree of hazard fatal. 6.1D is less hazardous than 6.1A

Some other important info

- Some hazardous substance have more than one classification. E.g. Diesel – 3.1D, 6.1E, 6.3B. 6.7B, 9.1B
- UN Number key identifier allocated by the United Nations Committee on transport of DGs
- Legislation identifies thresholds. Or the trigger level where the substance is considered dangerous. Trigger levels are different for each hazardous property

Risk Management HASWA 2015



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Things to think about

- Compatibility
  - Some are just not friends
- Health and exposure monitoring
  - E.g. monitoring blood or urine
  - Monitoring the work environment
- Storage
  - Minimise the amount stored
  - Safety Data Sheets

Safety Data Sheets

- Comprehensive information about the properties of a hazardous substance
- Key source of information to manage risks in the workplace
- Has 16 sections
- Must be less than 5 years old
- It is a legal duty of the PCBU to have a SDS for each substance

Acetone

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 11/12/1998 Revision date: 04/24/2018 Supersedes: 04/24/2018 Version: 1.3

SECTION 1: Identification

1.1. Identification

Product form	:	Substance
Substance name	:	Acetone
Chemical name	:	2-Propanone
CAS-No.	:	67-64-1
Product code	:	LC10420, LC10425
Formula	:	C3H6O
Synonyms	:	2-propanone / beta-ketopropane / dimethyl formaldehyde / dimethyl ketone / dimethylketal / DMK (=dimethyl ketone) / keto propane / methyl ketone / pyroacetic acid / pyroacetic ether / pyroacetic spirit

1.2. Recommended use and restrictions on use

Use of the substance/mixture	:	Solvent Cleaning product Chemical raw material
Recommended use	:	Laboratory chemicals
Restrictions on use	:	Not for food, drug or household use

1.3. Supplier

LabChem, Inc.

Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court

Zelienople, PA 16063 - USA

T 412-826-5230 - F 724-473-0647

1.4. Emergency telephone number

Emergency number	:	CHEMTREC: 1-800-424-9300 or +1-703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapour
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Specific target organ toxicity (single exposure) Category 3	H336	May cause drowsiness or dizziness

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

GHS02 GHS07

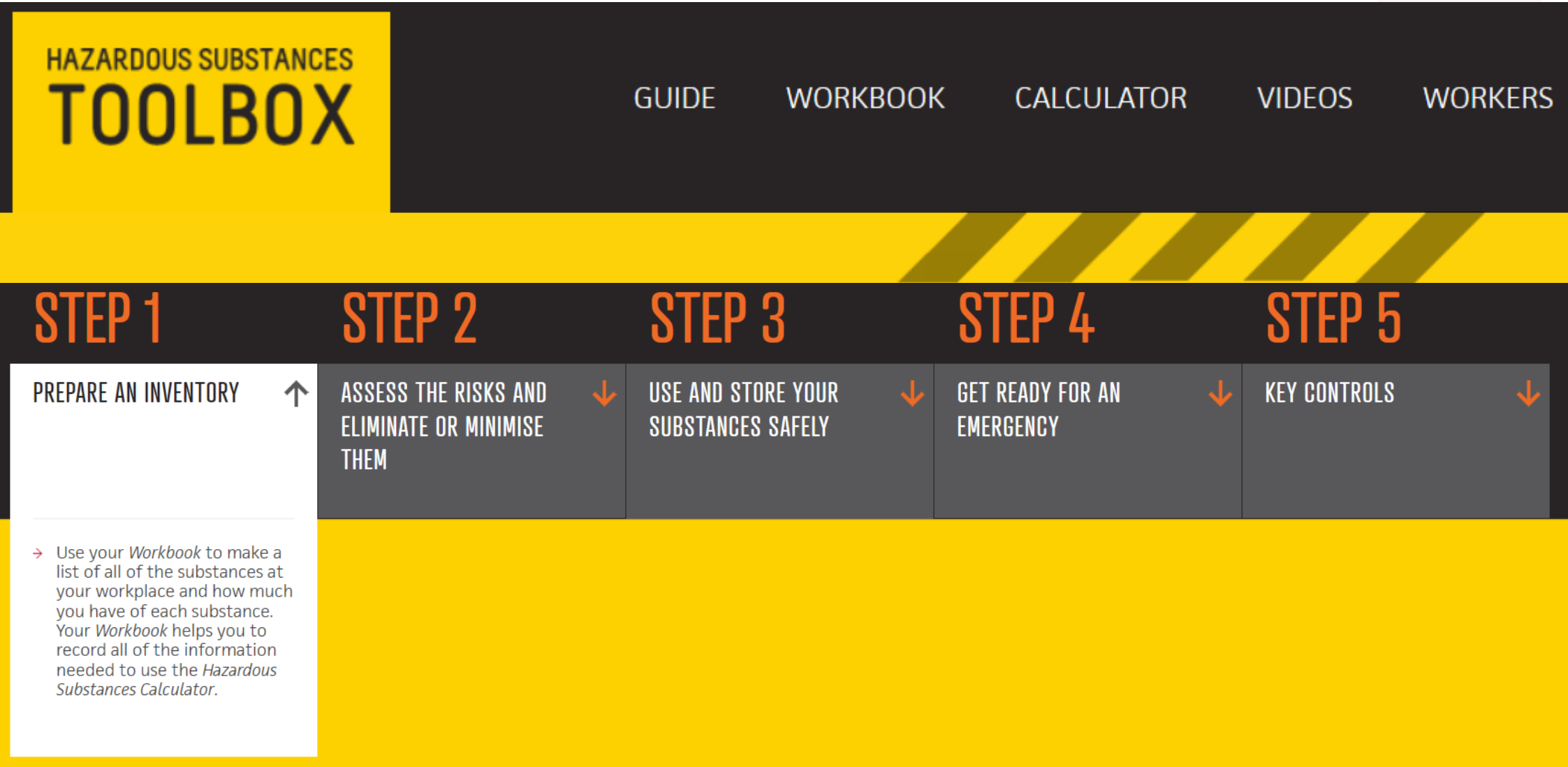
Signal word (GHS US)	:	Danger
Hazard statements (GHS US)	:	H225 - Highly flammable liquid and vapour H319 - Causes serious eye irritation H336 - May cause drowsiness or dizziness
Precautionary statements (GHS US)	:	P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking. P233 - Keep container tightly closed. P240 - Ground/bond container and receiving equipment. P241 - Use explosion-proof electrical, lighting, ventilating equipment P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P261 - Avoid breathing mist, spray, vapors.

Some other must haves

- Inventory
- Training
- PPE
- Storage
- Emergency Plans
- Spill Kits
- Labelling

Where to start

- www.hazardoussubstances.govt.nz



Workplace Exposure Standards and Biological Exposure Indices

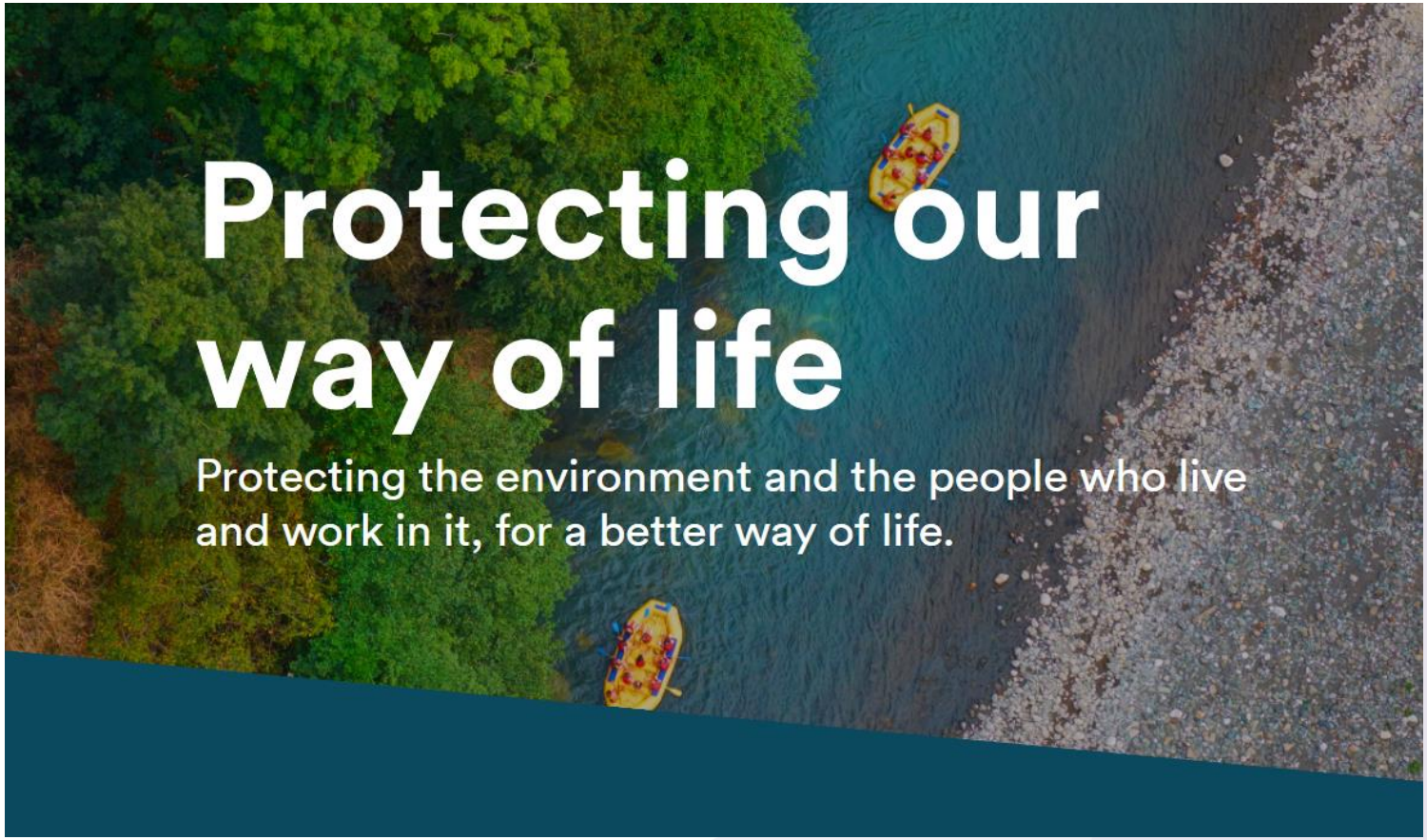
November 2018

10TH EDITION

Workplace exposure standards

A		TWA		STEL	
Substance	**CAS #**	**ppm**	**mg/m³**	**ppm**	**mg/m³**
‡ Acetaldehyde 6.7B	[75-07-0]	20		50	
Acetic acid	[64-19-7]	10	25	15	37
Acetic anhydride	[108-24-7]	Ceiling 5 ppm (21 mg/m³)			
Acetone (bio)	[67-64-1]	500	1,185	1,000	2,375

- https://epa.govt.nz/



Who can help?

HazTec
Certification & Consultancy

www.haztec.co.nz

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www.verticalhorizonz.com

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