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As this is a webinar we ask all participants to please note the following:

- MOBILE PHONES are to be either switched off or switched to silent
- SPEAKER VIEW: if you could please switch your screen to SPEAKER VIEW. To do this, take your mouse and hover over your screen and to the top RIGHT corner of your screen please click SPEAKER VIEW.
- MORNING TEA: Morning Tea will be at 11.30am for 20 min
- The Webinar will conclude at 1.30pm and will follow with Q&A for 15 minutes for those participants that have further queries of our presenter
- QUESTIONS: This is an interactive Webinar and you are encouraged to please ask any questions that you may have of our presenter, Ross. To ask a Question, please hover over your screen with your mouse and click on the UNMUTE button. Once you have asked your question, please click MUTE – to avoid any background noise from entering the Webinar. You may also hold down your space bar to ask your question and release it after you have asked your question. Ross and the AEBN team will be here to assist you.

THANK YOU!

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

AEBN SERIES 1: Dangerous Goods, Hazardous Substances and GHS Workshop Webinar

17 September 2025

Presented by

Australian Environment Business Network (AEBN)

www.aebn.com.au

Zoom Tips!

- Double click your screen for Full Screen Mode.
- When in Full Screen Mode, hover over the top of the participants bar to change your view of other participants.
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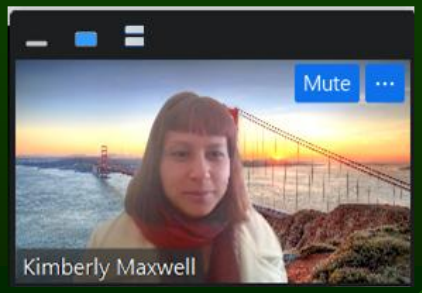
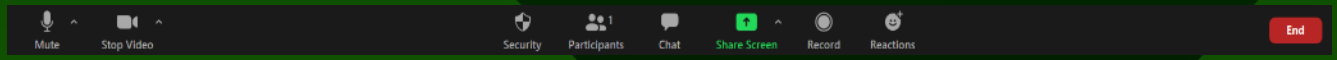
Full screen mode

Recommended speaker view





AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Ross Macfarlane
National Chemicals Specialist
Australian Environment Business Network (AEBN)

Ross has over 35 years experience in chemical safety – specifically in dangerous goods and hazardous substances.

Ross' specialty is in risk management, in particular, in occupational health and safety, environmental and quality management (OHSEQ). His experience covers such industries as chemical and petrochemical, mining and metals, automotive, manufacturing, timber, pulp and paper, construction, aviation, local government, roads, and the health sectors.

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Agenda

- Hazardous substances and dangerous goods
  - Legal compliance framework
- Safety Data Sheets
- Hazardous Substances
  - Approved Criteria vs. GHS
  - Globally Harmonised System
  - GHS Labelling
- Dangerous Goods
  - Terminology
  - Classes
- Packaging
- Storage and Handling
- Road and Rail Transport

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Objectives

- To be able to identify and be aware of the hazards of Dangerous Goods
- To make the Storage and Handling of Dangerous Goods safer
- Understand the Regulations and the Dangerous Goods terminology
- Your responsibilities
- Packaging and Labeling
- Segregation

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Why it matters?

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Australia has separate Legislation covering

- Dangerous Goods
- Hazardous Substances
- Hazardous Chemicals

Today's focus

- Major Hazard Facilities
- Explosives
- Security Sensitive Chemicals
- Scheduled Poisons
- Pharmaceuticals
- Agricultural Chemicals

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Dangerous Goods vs. Hazardous Substances vs. Hazardous Chemicals

- The term “Dangerous Goods” applies to chemicals which present immediate hazards during transport, and in Victoria and Western Australia, during storage and handling.
  - In other States, “Dangerous Goods” in storage and handling are technically known as “Schedule 11 Hazardous Chemicals”
  - In New Zealand, DG storage and handling falls under Hazardous Substances regulations
- “Hazardous Substances” are classified under GHS based on a wider range of hazards, including harm to people during short and long-term exposure, and harm to the environment.
  - In states other than VIC, these are called “Hazardous Chemicals” in the workplace.

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Dangerous Goods vs. Hazardous Substances vs. Hazardous Chemicals *(Cont…)*

- It is confusing!
- In this workshop, I will mainly use Victorian terminology, i.e.
  - Dangerous Goods – as classified under the *Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code*), whether in the workplace or during transport
  - Hazardous Substances – as classified under the *Globally Harmonized System for the Classification and Labelling of Chemicals (GHS)*

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Hazardous Substances that are Dangerous Goods

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Hazardous Substances that are not Dangerous Goods

Dangerous Goods

- Substances which constitute a hazard from **explosion, fire, toxicity, corrosivity or radioactivity**

and

Which are identified by **Class Labels**

and

Have a **UN Number**

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What are Dangerous Goods?

- Substances which pose a **physical threat** to
  - Persons
  - Property
  - The environment
- From
  - Explosion
  - Fire
  - Poisoning
  - Corrosion

In most cases they pose a short-term risk

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What are Hazardous Substances?

Can pose both short and long-term risks:

Physical hazards

- Explosion
- Fire
- Poisoning
- Radioactivity
- Corrosion

Health hazards

- Very toxic
- Toxic
- Harmful
- Corrosive
- Irritant

Environmental hazards

- To aquatic life
- To terrestrial vertebrates
- Ozone depleting

- Carcinogenic – cause cancer
- Mutagenic – cell mutation
- Sensitising – allergic reactions
- Teratogenic – birth defects

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White King bleach

- Dilute sodium hypochlorite (“pool chlorine”)
  - Is not a Dangerous Good
- Can cause eye damage and skin irritation
  - Is a Hazardous Substance

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Diesel fuel

- Has a high flashpoint – will not ignite easily
  - Is not a Dangerous Good
- Can cause dermatitis and will irritate the eyes
  - Is a Hazardous Substance

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Rexona deodorant

- Flammable Gas of Class 2.1, UN 1950 (Aerosol)
  - Is a Dangerous Good
  - Is a Hazardous Substance (Physical hazard only)

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Benzene

- Flammable Liquid of Class 3
  - Is a Dangerous Good
- Proven Carcinogenic Material
  - Is a Hazardous Substance (physical and health hazard)

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Regulatory framework

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Hazardous Substances

- Hazardous Chemicals regulated in nationally harmonised Work Health & Safety (WHS) laws:
  - ACT, NSW, NT, QLD, TAS, SA, WA, Commonwealth
- In VIC, Hazardous Substances are regulated under existing OHS Regulations
  - WA adopted WHS laws in 2022, but Dangerous Goods remain outside

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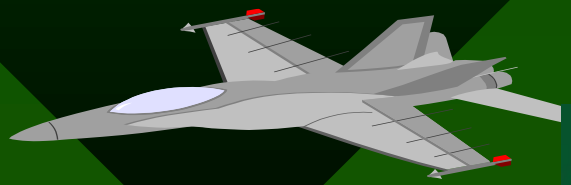
Storage & Handling of Dangerous Goods

- In ACT, NSW, NT, QLD, SA and TAS storage and handling of Dangerous Goods is covered by WHS Regulations
  - Referred to as “Schedule 11 Hazardous Chemicals”
- In VIC and WA this is covered in Dangerous Goods legislation



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Dangerous Goods Transport

- Not covered by the Work Health & Safety (WHS) regulations for hazardous chemicals.
- These continue to be covered by state-based transport laws and the Australian Dangerous Goods (ADG) Code.

Australian Code for the Transport of Dangerous Goods by Road & Rail

- ADG Code Issued by National Transport Commission (NTC)
  - Reviewed 2-yearly
- ADG7.8 (UN22)
  - Can be used until 1 October 2025
- ADG 7.9 (UN23)
  - Adopted from 1 October 2024, mandatory from **1 October 2025**
  - Derived from UN Recommendations on the Transport of Dangerous Goods 23rd Edition (UN23)
- Separate comprehensive review of ADG Code in progress

- Model Act For The Transport of Dangerous Goods by Road and Rail 2007
  - Model Subordinate Law for the Transport of Dangerous Goods By Road And Rail
- Other codes
  - IMDG Code (sea transport)
  - IATA Regulations (air transport)

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Recommendations on the

TRANSPORT OF DANGEROUS GOODS

Volume I
23rd revised edition

Model Regulations

23rd https://unece.org/transport/dangerous-goods/un-model-regulations-rev-23

UNITED NATIONS

Australian Code for the Transport of Dangerous Goods by Road & Rail

Edition 7.9, 2024

Volume I

Electronic version www.ntc.gov.au

National Transport Commission

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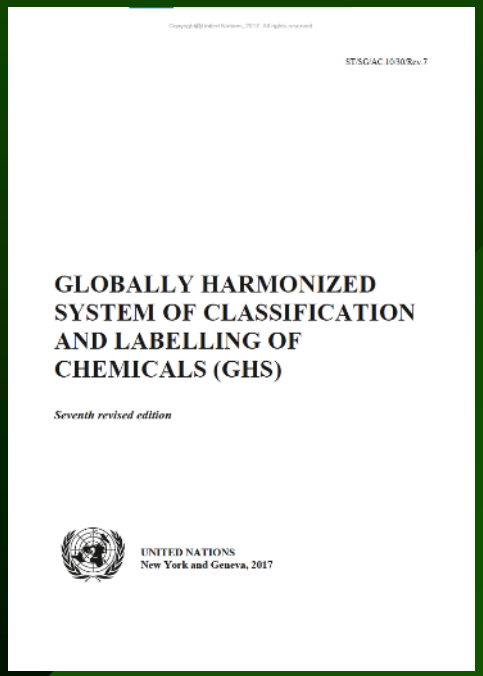
Hazardous Substances

- Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
  - Edition 3 adopted 1/1/2012, mandatory 1/1/2017
  - Edition 7 mandatory as of 1/1/2023
- National Codes of Practice
  - Managing Risk in the Workplace
  - Labelling
  - Safety Data Sheets



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Regulation – Victoria

- Dangerous Goods
- Dangerous Goods Act 1985
  - Dangerous Goods (Storage & Handling) Regulations 2022
    - Code of practice for the storage and handling of dangerous goods 2013
  - Dangerous Goods (Road & Rail Transport) Regulations 2018
  - Dangerous Goods (Explosives) Regulations 2022
  - Dangerous Goods (HCDG) Regulations 2016
- Hazardous Substances
- Occupational Health & Safety Act 2004
  - Occupational Health & Safety Regulations 2017 PART 4.1—HAZARDOUS SUBSTANCES
    - Compliance code: Hazardous substances

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Regulation – NSW

- Dangerous Goods
- Dangerous Goods (Road and Rail Transport) Act 2008 (NSW)
  - Dangerous Goods (Road and Rail Transport) Regulation 2022
- Storage & handling EXCLUDED

- Hazardous Substances
- Work Health and Safety Act 2011 (NSW)
  - Work Health and Safety Regulation 2017 Part 7.1 Hazardous chemicals
  - Division 3 Subdivision 2 Manifest of Schedule 11 hazardous chemicals (equivalent to Dangerous Goods storage & handling)

- National Codes of Practice
  - Managing Risks of Hazardous Chemicals in the Workplace
  - Labelling of Workplace Hazardous Chemicals
  - Preparation of Safety Data Sheets for Hazardous Chemicals

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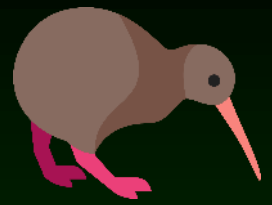
Regulation – WA

- Dangerous Goods
- Dangerous Goods Safety Act 2004
  - Dangerous Goods Safety (General) Regulations 2007
  - Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007
    - Guide – Dangerous Goods Safety (Storage and Handling of Non-explosives)
  - Dangerous Goods Safety (Road and Rail Transport of Non-explosives) Regulations 2007
- Hazardous Substances
- Work Health and Safety Act 2020 (WA)
  - Work Health and Safety (General) Regulations 2022 Part 7.1 Hazardous chemicals
    - Approved code of practice – Managing risks of hazardous chemicals in the workplace

Regulation – New Zealand



- In NZ Dangerous Goods transport is covered by the **Land Transport Rule: Dangerous Goods 2005**
  - Administered by NZ Transport Agency
- Requirements are set out in New Zealand Standard NZS 5433:2020, Transport of dangerous goods on land
  - SNZ HB 5433:2021 UN dangerous goods list (published 28/01/22)
- Storage and handling of Hazardous Substances, including Dangerous Goods, is covered by Health and Safety at Work (Hazardous Substances) Regulations 2017
  - Administered by WorkSafe New Zealand
- 4-year transition to GHS 7 ended on **30 April 2025**
  - Replaced classification based on Hazardous Substances & New Organisms (HSNO) Regs

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National Legislation Cross-Reference

Location	Hazardous Substances / GHS	Dangerous Goods Storage & Handling	Dangerous Goods Transport
Commonwealth	Work Health and Safety Regulation 2011	Work Health and Safety Regulation 2011	National Transport Commission (Road Transport Legislation – Dangerous Goods Act) Regulations 2006
ACT	Work Health and Safety Regulation 2011	Work Health and Safety Regulation 2011	Dangerous Goods (Road Transport) Regulation 2010
NSW	Work Health and Safety Regulation 2017	Work Health and Safety Regulation 2017	Dangerous Goods (Road and Rail Transport) Regulation 2022
NT	Work Health and Safety (National Uniform Legislation) Regulations 2011	Work Health and Safety (National Uniform Legislation) Regulations 2011	Transport of Dangerous Goods By Road and Rail (National Uniform Legislation) Regulations 2011
QLD	Work Health and Safety Regulation 2011	Work Health and Safety Regulation 2011	Transport Operations (Road Use Management—Dangerous Goods) Regulation 2018
SA	Work Health and Safety Regulation 2012	Work Health and Safety Regulation 2012 Dangerous Substances (General) Regulations 2017	Dangerous Substances (Dangerous Goods Transport) Regulations 2023
TAS	Work Health and Safety Regulation 2022	Work Health and Safety Regulation 2022	Dangerous Goods (Road and Rail Transport) Regulations 2021
VIC	Occupational Health and Safety Regulations 2017	Dangerous Goods (Storage and Handling) Regulations 2022	Dangerous Goods (Transport by Road or Rail) Regulations 2018
WA	Work Health and Safety (General) Regulations 2022	Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007	Dangerous Goods Safety (Road and Rail Transport of Non-explosives) Regulations 2007
NZ	Health and Safety at Work (Hazardous Substances) Regulations 2017	Health and Safety at Work (Hazardous Substances) Regulations 2017	Land Transport Rule: Dangerous Goods 2005

Hazardous Substances

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Classification of Hazardous Substances

- A substance is deemed to be hazardous if it meets criteria specified in:
- Globally Harmonised System of Classification and Labelling of Chemicals 7th Revised Edition (GHS)

- GHS 7th Edition replaced 3rd Edition from 01/01/2023. Refer to Safe Work Australia guidance:
  - GHS 7 – transition (including 15-minute Youtube webinar)
  - Changes to chemical classifications and labelling under GHS 7

- Note: UNECE now up to 10th Revised Edition (2023)

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Globally Harmonised System of classification and labelling of chemicals (GHS)

- The GHS is an internationally recognised system for the classification of chemicals
  - Developed by United Nations Economic Commission for Europe (UNECE)
  - Derived from existing systems, e.g. USA, Canada, EU, UN Transport of Dangerous Goods (TDG), etc.
- Provides a harmonised system of hazard communication through labels and safety data sheets

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GHS classifies chemicals according to:

- Physical hazards
  - 9 classes, aligned to the dangerous goods classes
- Environmental hazards
  - Acute aquatic toxicity
  - Chronic aquatic toxicity
- Health hazards
  - Acute toxicity
  - Skin corrosion
  - Skin irritation
- Health hazards (cont.)
  - Serious eye damage
  - Eye irritation
  - Respiratory sensitizer
  - Skin sensitizer
  - Germ cell mutagenicity
  - Carcinogenicity
  - Reproductive toxicity
  - Specific target organ toxicity (STOT)
  - Aspiration hazard

Identifying hazards of chemicals

- Section 2 of the SDS
- Identifies hazardous substance chemical by:
  - Pictograms (similar to DG diamonds)
  - Signal Word – “WARNING” or “DANGER”
  - Hazard and Precaution statements
  - Hazard Category

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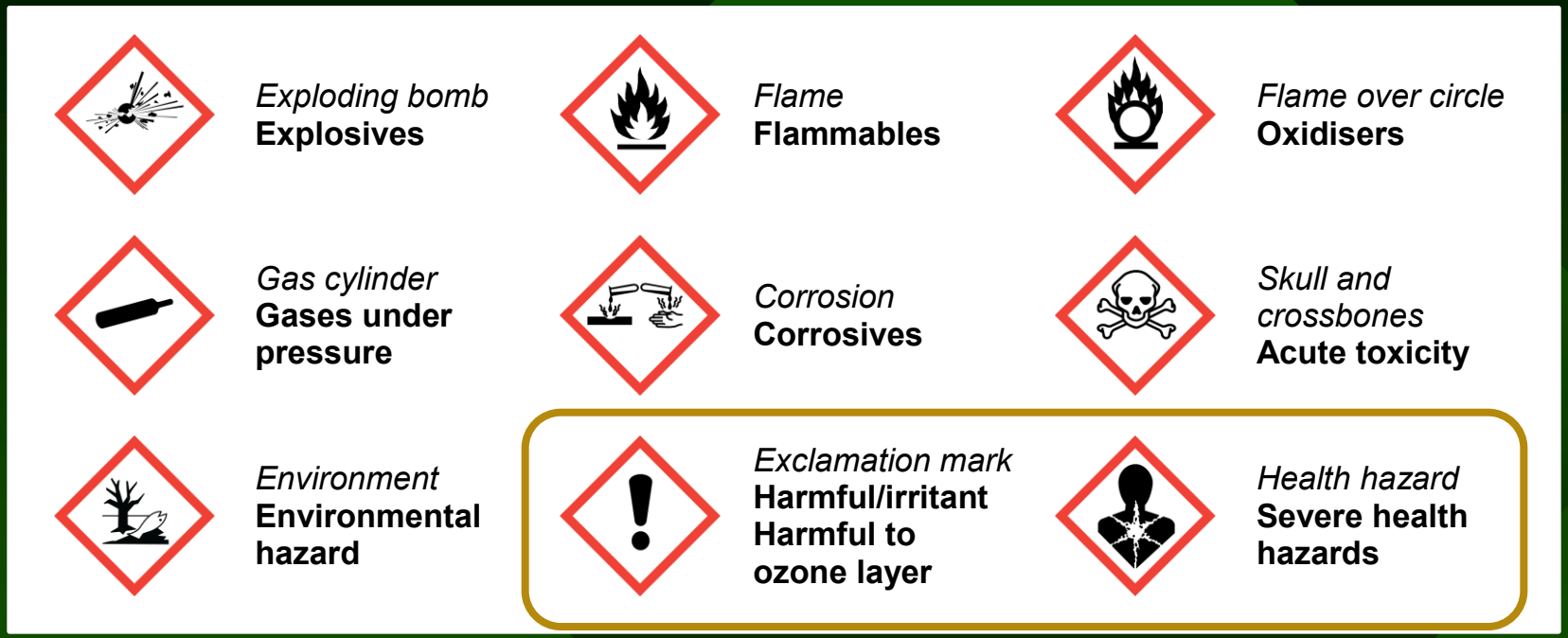
GHS Pictograms

- The GHS prescribes 9 pictograms to convey the hazards of chemicals



- Two new symbols introduced
- All relevant pictograms appear on label (according to the prioritisation rules).
  - In practice more than 4 pictograms is very rare

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GHS Pictograms

- The GHS also allows dangerous goods class labels to be displayed on labelling and safety data sheets.
- There are no equivalents to the “exclamation mark” and “health hazard” pictograms.

1 2 3 4 5 6 8 9

Dangerous Goods Class

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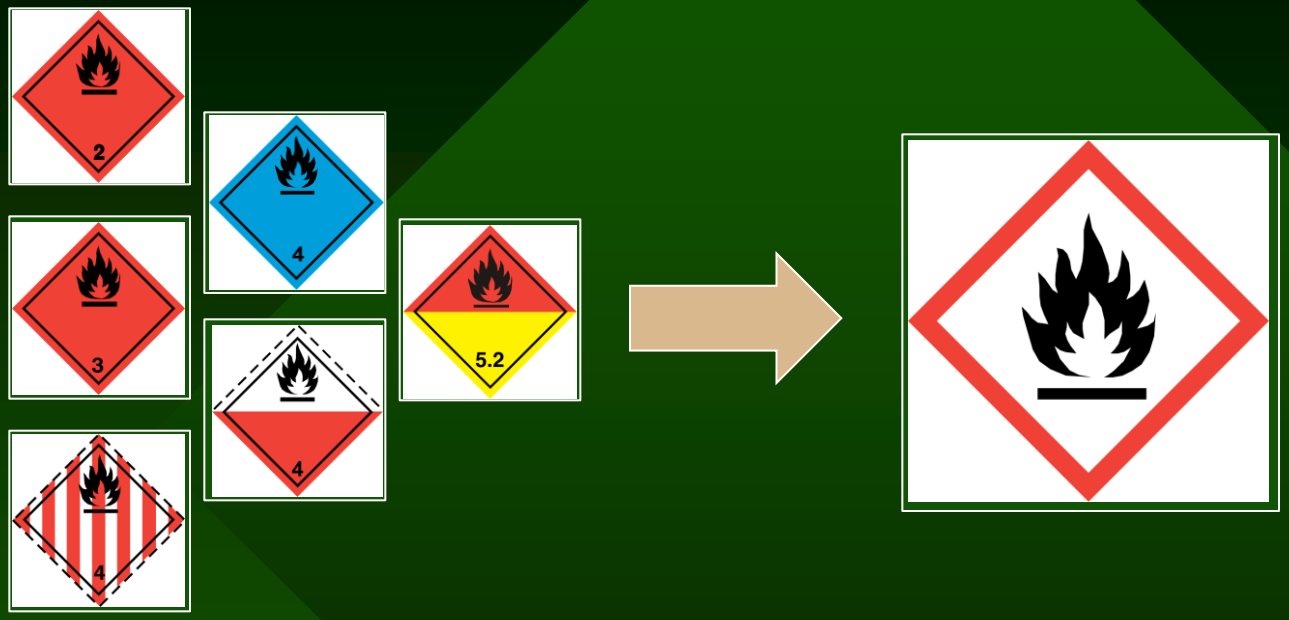
GHS Pictogram for Flammable chemicals



- 6 different “flammable” symbols become one – intrinsic hazard not always obvious at a glance.
  - Read label e.g. **In contact with water releases flammable gas**
  - **NO CHANGE TO PLACARDS** - DG symbol still required

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Hazard & Precaution Statements

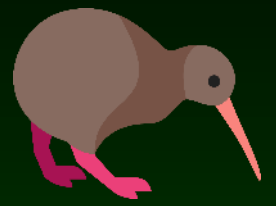
- H followed by 3 numbers
- Physical hazards
  - H225 Highly flammable liquid and vapour
- Health Hazards
  - H302: Harmful if swallowed
  - H350: May cause cancer
- Enviro hazards
  - H410: Very toxic to aquatic life with long-lasting effects
- Country-specific (Australia)
  - AUH014: Reacts violently with water

- P followed by 3 numbers
- General
  - P102: Keep out of reach of children
- Prevention
  - P233: Keep container tightly closed
- Response
  - P372: Explosion risk in case of fire
- Storage
  - P420: Store away from other materials
- Disposal
  - P501: Dispose of contents/container to …

Hazard Category

- Indicates level and type of Hazard
  - Category 1 is most hazardous
  - Category 4 is lowest
- Compare to Dangerous Goods Packing Group
  - PG I, II or III (most to least dangerous)
- Example – BP Unleaded Petrol
  - FLAMMABLE LIQUIDS - Category 1
  - SKIN CORROSION/IRRITATION - Category 2
  - GERM CELL MUTAGENICITY - Category 1B
  - CARCINOGENICITY - Category 1B
  - SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
  - ASPIRATION HAZARD - Category 1

Changes from HSNO to GHS 7 – New Zealand



- On 30 April 2025, 4-year transition from NZ's Hazardous Substances & New Organisms (HSNO) classification system to GHS 7 came to an end.
- All substances must now comply with updated labelling, safety data sheets and packaging notices.
- See : New Zealand's hazard classification system (EPA NZ)
  - HSNO to GHS7 Correlation table (PDF, 241KB)

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Safety Data Sheets (SDS)

- A **Safety Data Sheet** (SDS) is a technical bulletin containing detailed information about a hazardous substance.
  - Formerly known as a **Material** Safety Data Sheet (MSDS)
- An SDS must comply with VIC OHS Regulation 145
  - = WHS Regulations Part 7.1 Division 2
  - = NZ HSW (Hazardous Substances) Regulation 2.11
- The hazard identification for the substance must be determined in accordance with the GHS.

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Safety Data Sheet *(Cont.)*

- Is an advisory document
- Provides information on particular substances
- However, producer of document picks up responsibility for:
  - Completeness
  - Accuracy
- Duty of care

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Safety Data Sheet *(Cont.)*

- The manufacturer or importing supplier of a hazardous substance must ensure an SDS is prepared
- Manufacturer or supplier must ensure a copy is provided
  - on or before the first occasion that the substance is supplied to a person,
  - after the SDS is reviewed
  - to any employer who intends to use that hazardous substance in a workplace, on request.

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Should a Safety Data Sheet be less than 5 years old?

- YES!
- VIC OHS Reg 146 Review and revision of safety data sheet
  - A **manufacturer** or an **importing supplier** of a hazardous substance must ensure that the safety data sheet for a substance is reviewed—

  a) as often as is necessary to ensure that the safety data sheet contains current and accurate information; and

  b) at least every 5 years.

  - **AND**
- An **employer** must ensure that a **current** safety data sheet is available (Reg 155 and 156).
- WHS Reg 330:
  - (3) The manufacturer or importer of the hazardous chemical must:
  - (a) review the safety data sheet at least once every 5 years…

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16 Header SDS – Sections

- Section 1 Identification of the material and supplier
- Section 2 Hazards identification
- Section 3 Composition/information on ingredients
- Section 4 First aid measures
- Section 5 Fire fighting measures

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16 Header SDS – Sections *(Cont.)*

- Section 6 Accidental release measures
- Section 7 Handling and Storage
- Section 8 Exposure Control / Personal Protection
- Section 9 Physical and chemical properties
- Section 10 Stability and reactivity

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16 Header SDS – Sections *(Cont.)*

- Section 11 Toxicological information
- Section 12 Ecological information
- Section 13 Disposal considerations
- Section 14 Transport information
- Section 15 Regulatory information
- Section 16 Other information

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SAFETY DATA SHEET

SECTION 1 IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Identifier	**METHYLATED SPIRITS**
Other Names	Ethanol, Ethyl Alcohol, IMS
Manufacturer's Product Code	15000
Recommended Use	Solvent, Cleaning Solvent

Details of Supplier/Manufacturer

Company:	Recochem Inc. ABN: 69 010 485 999
Address:	1809 Lytton Road, Lytton, Queensland 4178
Phone:	(07) 3308 5200 Fax: (07) 3308 5201
Website:	www.recochem.com.au

Emergency Telephone Numbers

Business Hours:	(07) 3308 5200
After Hours:	1300 131 001
Poisons Information:	Australia: 13 11 26 New Zealand: 0800 764 766

SECTION 2 HAZARDS IDENTIFICATION

Hazardous chemical	*according to classification by Safe Work Australia*
Dangerous goods	*according to the Australian Code for the Transport of Dangerous Goods by Road and Rail*

Signal Word	**DANGER**

GHS Classification	Pictogram	Hazard statement
Flammable Liquids, Category 2	 FLAME	H225 Highly flammable liquid and vapour
Serious Eye Damage/Irritation, Category 2A	 EXCLAMATION MARK	H319 Causes serious eye irritation

Precautionary statements:

GENERAL	
P101	If medical advice is needed, have product container or label at hand
P102	Keep out of reach of children
P103	Read label before use
PREVENTATIVE	
P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking
P233	Keep container tightly closed
P240	Ground and bond container and receiving equipment
P241	Use explosion-proof electrical/ventilation/lighting equipment
P242	Use non-sparking tools
P243	Take action to prevent static discharge
P264	Wash thoroughly after handling
P280	Wear protective gloves/eye protection/face protection
RESPONSE	
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313	If eye irritation persists: Get medical advice/attention
P370 + P378	In case of fire: Use foam/water spray/fog for extinction
STORAGE	
P403 + P235	Store in a well-ventilated place. Keep cool
DISPOSAL	
P501	Dispose of contents/container in accordance with local regulations

SECTION 3 COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients Names and Proportions

Chemical Entity	CAS Number	Proportion (%)
Ethanol	64-17-5	>= 95
Demin. Water	7732-18-5	<= 5
The following materials make up the denaturant of the fluid. They are not present in high enough concentrations to trigger any additional hazards.		
Denatonium Benzoate	3734-33-6	< 0.001
Methyl Isobutyl Ketone	108-10-1	0.25
Fluorescein	-	< 0.001

SECTION 4 FIRST AID MEASURES

Description of necessary first aid measures

Inhalation:	Remove victim from exposure if safe to do so. If rapid recovery does not occur, transport to nearest medical facility for additional treatment. Remove contaminated clothing.
Skin Contact:	If skin contact occurs, remove contaminated clothing and wash skin thoroughly with water and follow by washing with soap if available.
Eye Contact:	If in eyes, hold eyes open, flood with water for at least 15 minutes. If symptoms persist transport to nearest medical facility for additional treatment.

Safety Data Sheet Exercise

1. What is the issue date of the SDS?
2. What is the Product Name and name of the supplier?
   - Section 1
3. Is the material Hazardous? If yes, write down one (1) Hazard Statement.
   - Section 2
4. Is it a Dangerous Good? If so, what is the UN Number and Proper Shipping Name?
   - Section 14
5. Which section describes physical and chemical properties of the material? Write down two (2) of its physical or chemical properties.

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SAFETY DATA SHEET
SODIUM NITRATE
REVISION 5, DATE 28 MAR 2023

1. IDENTIFICATION

Product Name	**Sodium Nitrate**
Other Names	Nitrate of Soda; Sodium Nitrate Prilled; Sodium Nitrate Technical
Uses	Catalyst; fertiliser; fluxing agent; oxidant; preservative; propellant.
Chemical Family	No Data Available
Chemical Formula	NaNO3
Chemical Name	Nitric acid, sodium salt
Product Description	No Data Available

1. What is the issue date of the SDS?

2. What is the Product Name and name of the supplier?
   - Section 1

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)			Not Scheduled
Hazard Classification			Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Hazard Categories			Oxidising Solids - Category 3 Acute Toxicity (Oral) - Category 5 Serious Eye Damage/Irritation - Category 2A
Pictograms			
Signal Word			Warning
Hazard Statements		**H272**	May intensify fire; oxidizer.
		H303	May be harmful if swallowed.
		H319	Causes serious eye irritation.
Precautionary Statements	Prevention	**P210**	Keep away from heat.
		P221	Take any precaution to avoid mixing with combustibles/organic material.
		P280	Wear protective gloves/eye protection/face protection.
	Response	**P370 + P378**	In case of fire: Use water for extinction.
		P337 + P313	If eye irritation persists: Get medical advice.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

3. Is the material Hazardous? If yes, write down one (1) Hazard Statement.
   - ➢ Section 2

14. TRANSPORT INFORMATION

4. Is it a Dangerous Good? If so, what is the UN Number and Proper Shipping Name.
   - ➢ Section 14

Land Transport (Australia)
ADG Code

Proper Shipping Name	SODIUM NITRATE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
EPG	31 Oxidizing Substances
UN Number	1498
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available

Land Transport (Malaysia)
ADR Code

Proper Shipping Name	SODIUM NITRATE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
EPG	31 Oxidizing Substances
UN Number	1498
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline or prilled
Odour	Odourless
Colour	White
pH	8 - 10 (5% aqueous solution)
Vapour Pressure	Negligible at ambient conditions (@ No Data Available)
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	306 - 307 °C
Freezing Point	No Data Available
Solubility	Soluble in water (88 g/100 ml)
Specific Gravity	2.26
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	>550 °C

5. Which section describes physical and chemical properties of the material? Write down two (2) of its physical or chemical properties.

Safety Data Sheet Exercise

1. What is the issue date of the SDS?
   - 28 March 2023
2. What is the Product Name and name of the supplier?
   - Redox Sodium Nitrate
3. Is the material Hazardous? If yes, write down one (1) Hazard Statement.
   - Yes:
   - **H272** May intensify fire; oxidizer.
   - **H303** May be harmful if swallowed.
   - **H319** Causes serious eye irritation.

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Safety Data Sheet Exercise

4. Is it a Dangerous Good? If so, what is the UN Number and Proper Shipping Name?
   - UN Number 1498, Proper Shipping Name SODIUM NITRATE
5. Which section describes physical and chemical properties of the material? Write down two (2) of its physical or chemical properties.
   - Physical State Solid, Appearance Crystalline or prilled, Odour Odourless, Colour White, pH 8 - 10 (5% aqueous solution), etc.

Hazardous Substances Register

- Legal requirement
  - VIC OHS Reg 162 and DG (S&H) Reg 58
  - WHS Regulation 346
- List of product names of all Hazardous Substances in the workplace, including Dangerous Goods and combustible liquids
- Accompanied by the current SDS
- Can (should!) be combined with Dangerous Goods Register

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

DG & Hazardous Substance Register

Supplier	Product	Issue Date	Expiry Date	Eye Hazard	Skin Hazard	Inhalation	Ingestion	DG Class
BOC Gases	Argoshield Light	19/08/2021	19/08/2026	No	No	No	No	2.2 Non-Flammable Non-Toxic Gas
BOC Gases	Oxygen, Compressed	19/08/2021	19/08/2026	No	No	No	No	2.2 Non-Flammable Non-Toxic Gas
bp	Automotive Diesel Fuel	14/05/2021	13/05/2026	**Yes**	**Yes**	**Yes**	**Yes**	**Combustible Liquid**
bp	Regular Unleaded Petrol	26/05/2021	26/05/2026	**Yes**	**Yes**	**Yes**	**Yes**	**3 Flammable Liquid**
Castrol	Activ 2T	24/03/2025	24/03/2030	No	No	No	No	No
Cement Australia	Blended Cement	24/03/2023	23/03/2028	No	No	No	No	No
Recochem	Methylated Spirits	31/01/2022	30/01/2027	Yes	No	No	Yes	**3 Flammable Liquid**
Redox	Sodium Nitrate	28/03/2023	27/03/2028	**Yes**	No	No	No	**5.1 Oxidiser**

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Dangerous Goods

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Recap: Hazardous Substances vs. Dangerous Goods

- Dangerous goods are classified based on immediate hazards during transport, storage and handling, e.g. explosion, fire, toxicity, corrosivity and radioactivity
- Hazardous substances are classified based on the risks they pose to people during short and long-term exposure
- While the categories overlap, they are not the same
- The categories are not static – they are changing progressively, in Australia and internationally

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

ADG Code

- Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
- Maintained by the National Transport Commission (NTC).
- Mainly intended for transport, but applies to manufacture and storage in relation to classification, labelling and packaging.

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

ADG Code *(Cont…)*

- ADG7 replaced ADG6 in 2007, to align line with the UN Recommendations on the Transport of Dangerous Goods, 13th Edition (UN13).
- ADG Code is reviewed 2-yearly based on UN Recommendations
  - 12-month overlap when adopted
- Current version:
  - ADG 7.8, based on UN22, adopted 1 April 2023, mandatory from 1 April 2024, can no longer be used from 1 October 2025.
  - ADG 7.9, based on UN23, adopted as of 1 October 2024 , mandatory from 1 October 2025.

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Structure of the ADG Code

- The Code consists of:
  - 13 Parts
  - 4 Appendices

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Structure of the ADG Code *(Cont…)*

1. General Provisions, Definitions and Interpretation
2. Classification
3. Dangerous Goods Lists, Special Provisions and Limited Quantities Exceptions
4. Packing, Tank, Container, Vehicle and Equipment Provisions
5. Consignment Procedures – Including Labelling, Marking and Placarding
6. Requirements for the Construction and Testing of Packagings, IBCs, Large Packagings, Portable Tanks, MEGCs, Bulk Containers, Tank Vehicles, Freight Containers & Segregation Devices

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Structure of the ADG Code *(Cont…)*

7. Provisions Concerning Transport Operations
8. Stowage and Restraint
9. Segregation
10. Bulk Transfer of Dangerous Goods
11. Documentation
12. Safety Equipment for Road Vehicles
13. Procedures during Road Transport

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Structure of the ADG Code *(Cont…)*

Four Appendices:

A. Goods too dangerous to be transported

B. Forms

C. Hazchem codes

D. Code of practice for reprocessing steel drums

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Classification of Dangerous Goods

- CLASS
  - DIVISION
- SUBSIDIARY HAZARD
- PACKING GROUP
- UN NUMBER
- PROPER SHIPPING NAME

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

DG Class, Division & Subsidiary Hazard

- CLASS means the Class of Dangerous Goods as shown in the ADG Code
- Within the Classes, there are DIVISIONS
- Substances can be classified within 2 or more Classes, with secondary Class(es) referred to as SUBSIDIARY HAZARDS

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Class 1: Explosives

Some Explosive Articles

Ammunition	Flash Powder	Smokeless Powder	Sounding Devices
Black Powder	Fuse	Primer	Torpedoes
Bombs	Fuse (Ammo)	Projectiles	Warheads
Charges	Igniters	Propellants	
Fireworks	Mines	Rocket Motors	
Flares	Powder cake	Signals	

Division 2.1 Flammable Gases

- Gases which ignite on contact with a source of ignition, however:
- They only ignite in a certain range of concentrations with air
- Above the upper limit – too rich to burn
- Below the lower limit – too lean to burn
  - Heavier-than-air gas leaks may flow and accumulate in low points
    - e.g. propane, butane (LPG)

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Aerosols

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Division 2.2 Non-Flammable Non-Toxic Gases

- Not Flammable when exposed to a source of ignition
- Not Toxic, but can cause death by asphyxiation
- Most are heavier than air, many 6 or 7 times heavier
- Some are stored in cryogenic form, i.e. below minus 150^{O}C

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Oxidising Gases

- Division 2.2 Non-Flammable Non-Toxic Gas with sub-hazard 5.1 Oxidiser
- Examples:
  - Oxygen gas
  - Nitrous oxide
- Oxidising Gas diamond can be used for road and rail transport in Australia
  - It is not used internationally and cannot be used for sea freight (IMDG)
  - Alternative is to use class 2.2 **and** sub-hazard 5.1 diamonds

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Division 2.3 – Toxic Gas

Most toxic gases are heavier than air and many have a subsidiary hazard

- Ammonia, Anhydrous Sub-Hazard 8
- Arsine SH 2.1
- Bromine Chloride SH 5.1 & 8
- Chlorine SH 5.1 & 8

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Class 3: Flammable Liquids

- The UN defines a flammable liquid as:
  - Any liquid having a flash point not more than 60^{o} C
- A C1 combustible liquid has a flash point above 60^{o} C and below 93^{o} C

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Class 4: Flammable Solids

Class 4 includes 3 Divisions with different diamonds:

- 4.1 Flammable solids
- 4.2 Spontaneously combustible
- 4.3 Dangerous when wet

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Division 4.1 Flammable Solids

- Can be easily ignited by flames, sparks etc and are readily combustible
- Danger may also come from toxic combustion products

Examples:
sulphur
red phosphorus
magnesium
matches
firelighters

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Division 4.1 Flammable Solids

- Includes
  - Readily Combustible Solids
  - Desensitized Explosives
  - Self-Reactive Materials
    - Classified into Types A, B, C, D, E, F and G

Division 4.2 - Spontaneously Combustible

Can burst into flames without an external source of ignition being applied

Two types:

1. Pyrophoric materials
2. Self-heating materials

Examples:

- White phosphorous (kept under water)
- Activated carbon
- Iron swarf

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Division 4.3 - Substances which in contact with water emit flammable gases

When they react with water, these substances are liable to become spontaneously flammable due to the heat liberated by the reaction.

Examples:

- sodium (gives off hydrogen)
- calcium carbide (gives off acetylene)

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Division 5.1 – Oxidizing Agents

Not necessarily combustible but can liberate oxygen and therefore increase ferocity of a fire

Examples:

- Sodium Nitrate
- Hydrogen Peroxide

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Division 5.2 – Organic Peroxides

Can react with organic materials to cause fire

Example:

- Epoxy adhesive hardener, MEKP (Methyl Ethyl Ketone Peroxide)

This DG Class Diamond is no longer used (discontinued as of 2011)

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Division 6.1 - Toxic Substances

Liable to cause death or serious injury or be harmful to health if swallowed, inhaled or by skin contact

Examples:

- Sodium cyanide
- N,N-dimethylaniline
- Alkaloids, solid, N.O.S.
- Trichlorethylene
- Methylene chloride

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Division 6.2 Infectious Substances

An infectious substance is a viable microorganism or its toxin that causes or can cause disease in humans or animals.

Potentially infectious substances include:

- Blood and blood products
- Skin, tissue, cell cultures
- Pathogens
  - –(viruses, bacteria, parasites, etc.)

This placard is used for transport and on containers, but is not required for storage areas.

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Class 7: Radioactive Materials

Radioactive White-I, Yellow-II, and Yellow-III alerts emergency response workers to increasing radioactivity.

White-I is the least radioactive and Yellow-III is the most radioactive.

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Class 8 - Corrosives

A corrosive material is either of the following:

1. Liquid or solid that causes visible destruction or irreversible alterations in skin tissue at the site of contact.
2. Liquid that has a severe corrosion rate on steel or aluminum, as measured in accordance with certain prescribed UN testing procedures.

Examples:

- Solids sodium hydroxide pellets
- Liquids hydrochloric acid
- Some gases have sub-hazard 8 Corrosive

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Class 8 - Corrosives

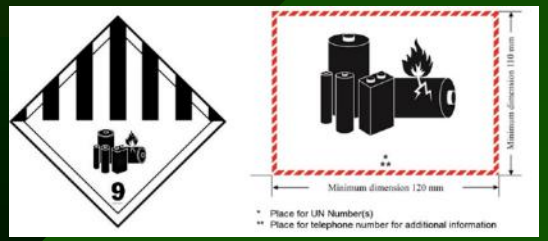
Most corrosives are either Acidic or Alkaline

- Acids – pH LESS THAN 7
  - Strong acids – pH 0-2
  - e.g. Hydrochloric acid, Sulphuric acid
- Alkalis – pH GREATER THAN 7
  - Strong alkalis – pH 12-14
  - e.g. Sodium hydroxide, Potassium hydroxide
- Class 8 Acids and Alkalis must be segregated
  - Check pH in the SDS: SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Class 9: Miscellaneous Hazardous Materials

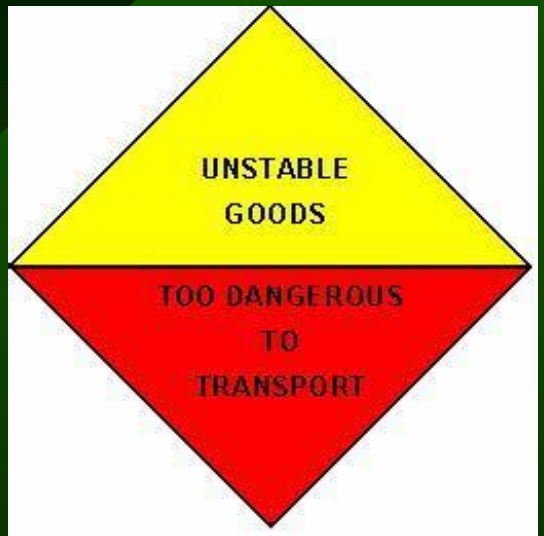
- Materials that present a hazard during transportation but not included in any other hazard class.
- Examples
  - materials with anaesthetic or noxious properties
  - elevated-temperature substances – e.g. hot bitumen
  - hazardous wastes
  - marine pollutants
  - magnetized materials,
  - lithium and sodium batteries (risk of fire if damaged)



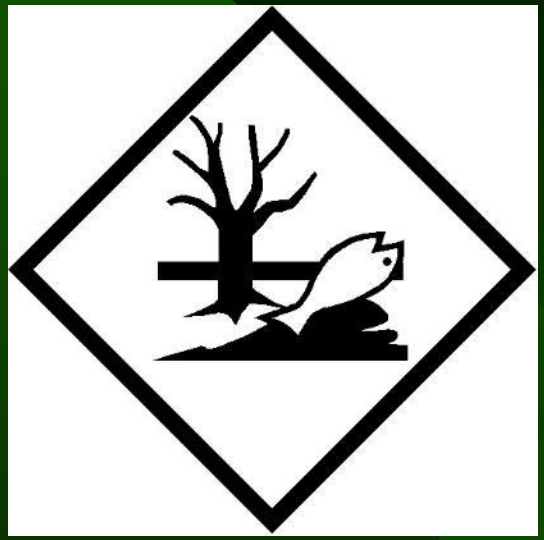
AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Other Dangerous Goods Diamonds

Multi Class diamond – used for transport



Goods too dangerous to be transported



Environmentally Hazardous mark

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Subsidiary Hazard

- A secondary hazard (or risk) that meets the UN criteria

- e.g. Hydrogen peroxide
  - Class 5.1
  - Subsidiary hazard 8

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Packing Group

- Packing Group I
  - Great Danger
- Packing Group II
  - Medium Danger
- Packing Group III
  - Minor Danger

- Used for packing purposes, to classify common DGs
- NOT used for explosives, gases, radioactives, organic peroxides, infectious substances and some class 4 substances

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

DG Packing Group vs. GHS Category

- GHS refers to “Categories” which are aligned to DG Packing Groups
  - e.g. DG Class 3 Flammable Liquids

DG PG	GHS Category	Criteria	Hazard Statement
I	1	Flash point < 23°C and initial boiling point ≤ 35°C	H224 Extremely flammable liquid and vapour
II	2	Flash point < 23°C and initial boiling point >35°C	H225 Highly flammable liquid and vapour
III	3	Flash point ≥ 23°C and ≤ 60°C	H226 Flammable liquid and vapour
	4	Flash point > 60°C and ≤ 93°C	H227 Combustible liquid

UN Number

- Internationally recognized 4-digit number – mainly used in transport.
- Maybe specific to a chemical, or generic to a class – e.g.
  - UN 1114 BENZENE
  - UN 1950 AEROSOLS
  - UN 2921 CORROSIVE SOLID, FLAMMABLE, N.O.S. (*Not Otherwise Specified*)
  - UN 3480 LITHIUM ION BATTERIES (including lithium ion polymer batteries)

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Proper Shipping Name

2790 ACETIC ACID SOLUTION more than 10% but not less than 80% acid by mass

The proper shipping name is the part of the description shown in UPPER CASE

Special Classifications

- Materials transported at or above their flash point are classified as flammable liquids
  - UN 3256 ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S.
    - Example is hot bitumen
- Liquids transported above 100°C, and solids transported above 240°C are Class 9
  - UN 3257 ELEVATED TEMPERATURE LIQUID, N.O.S.
  - UN 3258 ELEVATED TEMPERATURE SOLID, N.O.S.

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

ELEVATED TEMPERATURE LIQUID FLAMMABLE

UN No.

3256

HAZCHEM **2Y**

IN EMERGENCY, DIAL 000, POLICE OR FIRE BRIGADE

SPECIALIST ADVICE

131 700

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Fire Risk Dangerous Goods

- Goods which burn readily or support combustion
- Classes 2.1, 3, 4 or 5, or products with a 2.1, 3, 4 or 5 sub-hazard

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Packaging

- Dangerous Goods for transport must be in approved packaging.
  - Prescribed packaging (e.g. Gas cylinders)
  - Packaging that has a requirement to pass a testing standard (e.g. Steel drum)

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

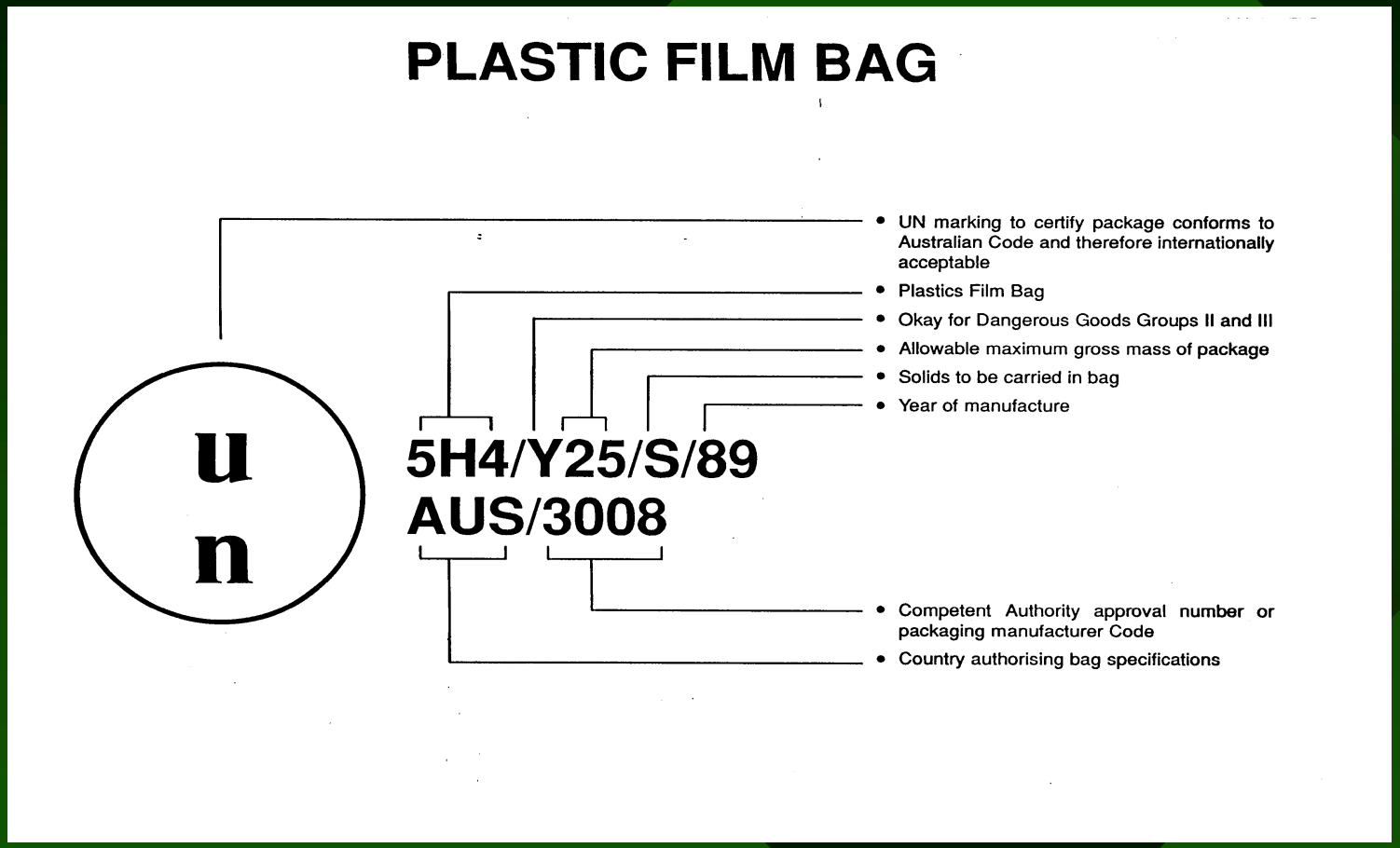
Prescribed Packaging

Particular forms of packaging are prescribed for some classes of Dangerous Goods

- Class 2 Gases
- Division 4.1 Self-reactive substances only
- Division 5.2 Organic Peroxides

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Approved Package Marking



AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Other Information

ADG includes a large amount of specific detail about packaging and transport – e.g.

P010	PACKING INSTRUCTION (LIQUIDS)		P010
The following packagings are authorised provided that the general provisions of **4.1.1** and **4.1.3** are met:			
Combination packagings			
Inner packagings	**Outer packagings**	**Maximum net mass (see 4.1.3.3)**	
	Drums		
Glass 1 L	steel (1A1, 1A2)	400 kg	**142**
Metal 40 L	plastics (1H1, 1H2)	400 kg	
	plywood (1D)	400 kg	
	fibre (1G)	400 kg	**144**
	Boxes		
	steel (4A)	400 kg	
	natural wood (4C1, 4C2)	400 kg	
	plywood (4D)	400 kg	
	reconstituted wood (4F)	400 kg	
	fibreboard (4G)	400 kg	
	expanded plastics (4H1)	60 kg	
	solid plastics (4H2)	400 kg	
Single packagings		**Maximum capacity (see 4.1.3.3)**	
Drums	steel, non-removable head (1A1)	450 L	**387**
Jerricans	steel, non-removable head (3A1)	60 L	
Composite packagings	Plastics receptacle in steel drums (6HA1)	250 L	
Steel pressure receptacles, provided that the general provisions of 4.1.3.6 are met.			

Solvent extracted soya bean meal containing not more than 1.5% oil and 11% moisture, which is substantially free of flammable solvent, is not subject to this Code.

An aqueous solution containing not more than 24% alcohol by volume is not subject to this Code.

Lithium batteries in conformity with 2.9.4 (f) containing both primary lithium metal cells and rechargeable lithium ion cells shall be assigned to UN Nos. 3090 or 3091 as appropriate. When such batteries are transported in accordance with special provision 188, the total lithium content of all lithium metal cells contained in the battery shall not exceed 1.5 g and the total capacity of all lithium ion cells contained in the battery shall not exceed 10 Wh.

Other requirements

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

AICIS

- Companies importing or manufacturing industrial chemicals into Australia need to register with AICIS (Australian Industrial Chemicals Introduction Scheme)
  - Formerly NICNAS (National Industrial Chemicals Notification and Assessment Scheme)
- All imported or manufactured chemicals must be listed on the Australian Inventory of Industrial Chemicals (AICS)
  - Most substances are already listed.
- New (unlisted) substances must be categorised as:
  - Listed introduction,
  - Exempted introduction,
  - Reported introduction,
  - Assessed introduction, or
  - Commercial evaluation.
    - See: https://www.industrialchemicals.gov.au/

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

SUSMP (Poisons Schedule)

Standard for the Uniform Scheduling of Medicines and Poisons

Schedule	Description
Schedule 2.	Pharmacy Medicine
Schedule 3.	Pharmacist Only Medicine
Schedule 4.	Prescription Only Medicine, or Prescription Animal Remedy
Schedule 5.	**Caution**
Schedule 6.	**Poison**
Schedule 7.	**Dangerous Poison**
Schedule 8.	Controlled Drug
Schedule 9.	Prohibited Substance
Schedule 10	Substances of such danger to health as to warrant prohibition of sale, supply and use

A Health Department Poisons License may be required to manufacture, store, supply or use certain Schedule 7 poisons

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

APVMA

- Australian Pesticides and Veterinary Medicines Authority (APVMA) has a separate registration process and separate labelling requirements
  - The labelling requirement is **unrelated** to GHS or DG.
- Before an agricultural or veterinary chemical product can be legally supplied, sold, or used in Australia it must be registered by APVMA, and display an approved label.
  - See https://www.apvma.gov.au/registrations-and-permits/apvma-labelling-codes
- Specific training is available for users ("ChemCERT" / Agricultural Chemical User Permit, ACUP)

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

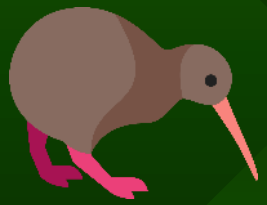
URL - additional information

- Australian Dangerous Goods Code (ADG)
  - http://www.ntc.gov.au/heavy-vehicles/safety/australian-dangerous-goods-code/
- Safe Work Australia
  - www.safeworkaustralia.gov.au
- National Transport Commission – ADG Code
  - https://www.ntc.gov.au/codes-and-guidelines/australian-dangerous-goods-code
- UN Model Regulations for the Transport of Dangerous Goods
  - https://unece.org/info/publications/pub/364867
- Global Harmonisation System (GHS) – UNECE
  - https://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html
- Labelling of Agricultural and Veterinary chemicals
  - https://apvma.gov.au/registrations-and-permits/labelling-codes
- Poisons Schedule (SUSMP)
  - https://www.tga.gov.au/publication/poisons-standard-susmp

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

URL - additional information

- EPA NZ – Hazardous substances classification
  - https://www.epa.govt.nz/industry-areas/hazardous-substances/new-zealands-new-hazard-classification-system/
- WorkSafe New Zealand – Hazardous Substances
  - https://www.worksafe.govt.nz/topic-and-industry/hazardous-substances/
- Hazardous Substances Toolbox
  - https://www.hazardoussubstances.govt.nz/
- NZ Land Transport Agency
  - https://nzta.govt.nz/resources/rules/dangerous-goods-2005-index/
- NZ Health and Safety at Work (Hazardous Substances) Regulations
  - https://www.legislation.govt.nz/



AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Australian & New Zealand Standards

- AS 1940–2017 The storage and handling of flammable and combustible liquids
- AS 2243.2:2021 Safety in laboratories Chemical aspects and storage
- AS 3780–2023 The storage and handling of corrosive substances
- AS/NZS 3833:2007 The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers
- AS 4332–2004 (R2016) The storage and handling of gases in cylinders
- AS/NZS 4452:1997 The storage and handling of toxic substances
- AS/NZS 4681:2000 The storage and handling of Class 9 (miscellaneous) dangerous goods and articles
- AS/NZS 5026:2012 The storage and handling of Class 4 dangerous goods
- NZS 5433:2020 Transport of dangerous goods on land
- SNZ HB 5433:2021 UN dangerous goods list

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Sources of information

- Physical inspection
- Internal and external audits
- Employee knowledge and expertise
- Trade journals
- WorkCover alerts and publications
- Incident /injury records
- Industry associations

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

Sources of information *(Cont…)*

- Product information
- Technical data sheets
- Manufacturers instruction manuals
- Personal contacts
- By asking ‘What if?’
- Brainstorming

AUSTRALIAN ENVIRONMENT BUSINESS NETWORK

AEBN SERIES 1: Dangerous Goods, Hazardous Substances and GHS Workshop Webinar

17 September 2025

Presented by

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