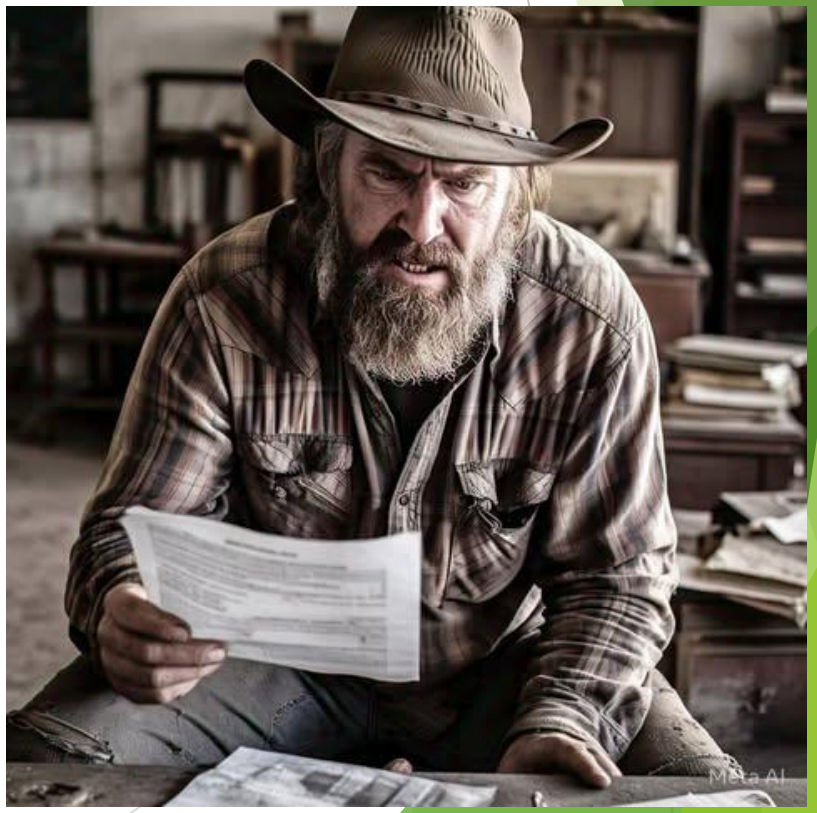
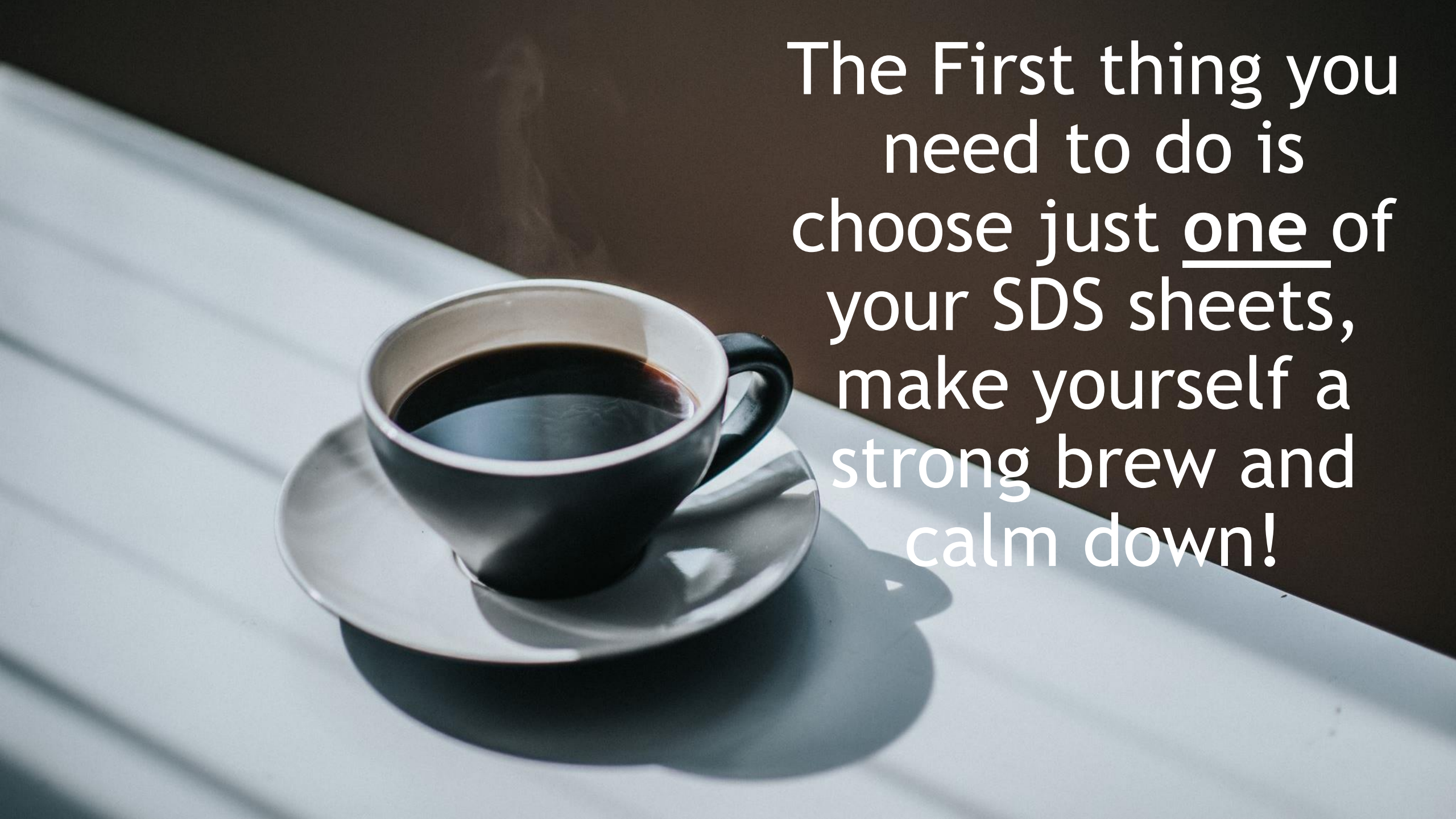
Risk Assessment Basics For Hazardous Substances

(Don’t Panic – It’s not as hard as you might think!!)

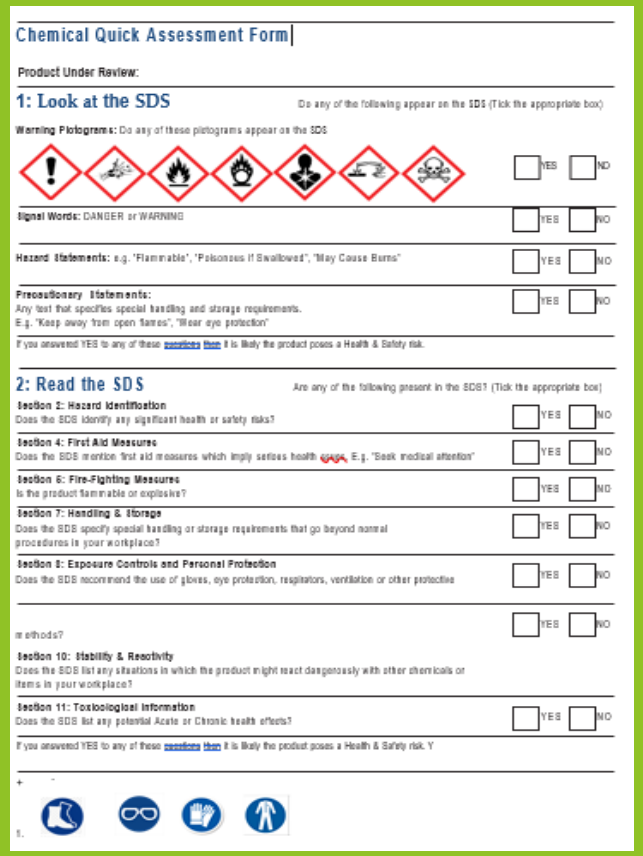


How do you feel when you learn that you need to conduct a Risk Assessment on the Hazardous Substances in your work-place?


The First thing you need to do is choose just one of your SDS sheets, make yourself a strong brew and calm down!

If you haven’t already found a “user friendly” risk assessment template to record your findings, take a few notes that you can come back to later.

If you have a template, now is the time to start marking off your findings.



Chemical Quick Assessment Form

Product Under Review:

1: Look at the SDS

Do any of the following appear on the SDS (Tick the appropriate box)

Warning Pictograms: Do any of these pictograms appear on the SDS

Signal Words: DANGER or WARNING

Hazard Statements: e.g. "Flammable", "Poisonous if Swallowed", "May Cause Burns"

Precautionary Statements:
Any text that specifies special handling and storage requirements.
E.g. "Keep away from open flames", "Wear eye protection"

If you answered YES to any of these questions then it is likely the product poses a Health & Safety risk.

2: Read the SDS

Are any of the following present in the SDS? (Tick the appropriate box)

Section 2: Hazard Identification
Does the SDS identify any significant health or safety risks?

Section 4: First Aid Measures
Does the SDS mention 'first aid measures which imply serious health risks. E.g. "Seek medical attention"

Section 6: Fire-Fighting Measures
Is the product flammable or explosive?

Section 7: Handling & Storage
Does the SDS specify special handling or storage requirements that go beyond normal procedures in your workplace?

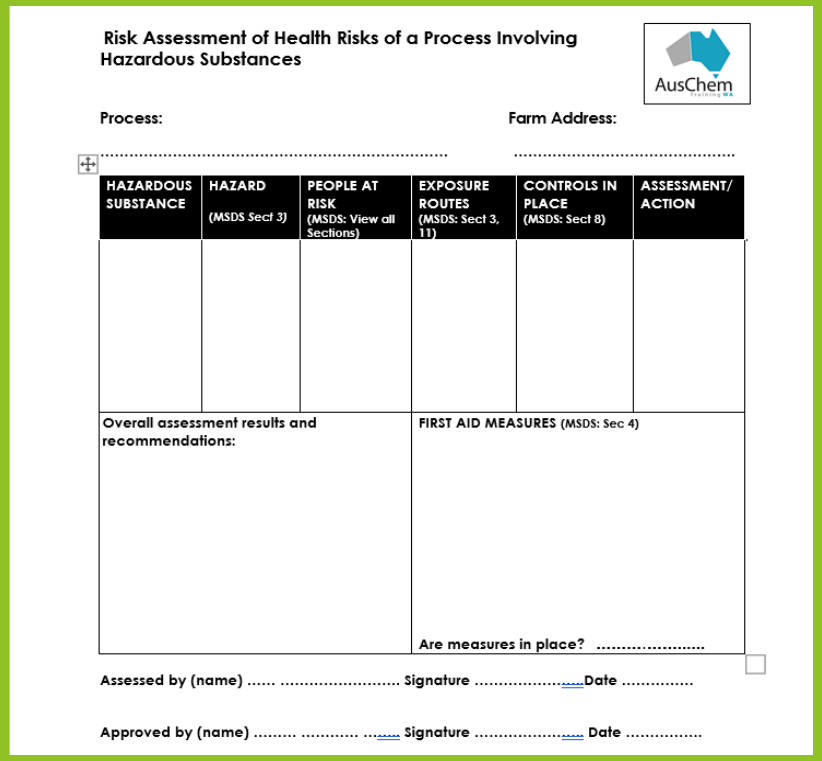
Section 8: Exposure Controls and Personal Protection
Does the SDS recommend the use of gloves, eye protection, respirators, ventilation or other protective

methods?

Section 10: Stability & Reactivity
Does the SDS list any situations in which the product might react dangerously with other chemicals or items in your workplace?

Section 11: Toxicological Information
Does the SDS list any potential Acute or Chronic health effects?

If you answered YES to any of these questions then it is likely the product poses a Health & Safety risk. Y



Risk Assessment of Health Risks of a Process Involving Hazardous Substances

AusChem

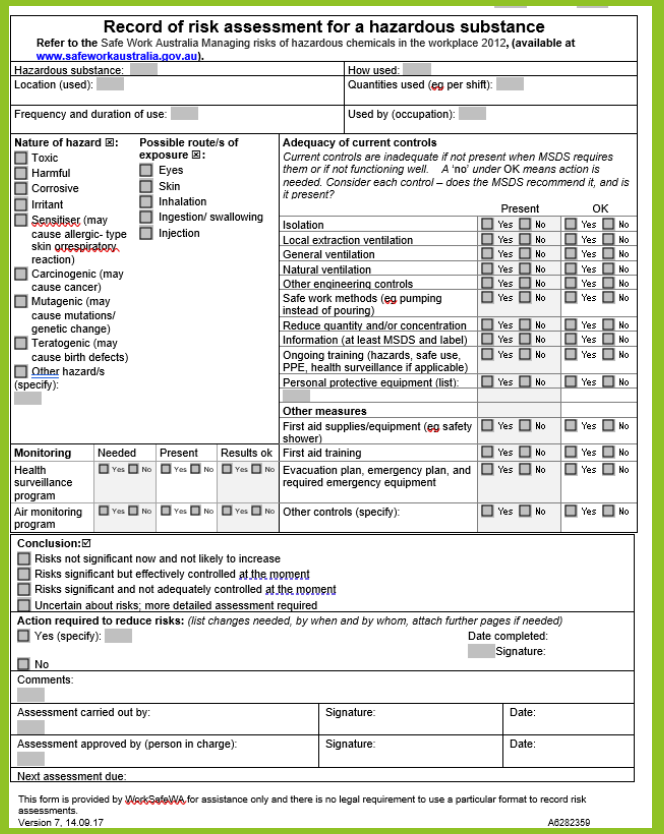
Process: ..... Farm Address: .....

HAZARDOUS SUBSTANCE	HAZARD (MSDS Sect 3)	PEOPLE AT RISK (MSDS: View all Sections)	EXPOSURE ROUTES (MSDS: Sect 3, 11)	CONTROLS IN PLACE (MSDS: Sect 8)	ASSESSMENT/ ACTION
Overall assessment results and recommendations:			FIRST AID MEASURES (MSDS: Sec 4)		

Are measures in place? .....

Assessed by (name) .... Signature ..... Date .....

Approved by (name) .... Signature ..... Date .....



Record of risk assessment for a hazardous substance

Refer to the Safe Work Australia Managing risks of hazardous chemicals in the workplace 2012, (available at www.safeworkaustralia.gov.au).

Hazardous substance: | How used:

Location (used): | Quantities used (eg per shift):

Frequency and duration of use: | Used by (occupation):

Nature of hazard ☒:
- Toxic
- Harmful
- Corrosive
- Irritant
- Sensitiser (may cause allergic- type skin orespiratory reaction)
- Carcinogenic (may cause cancer)
- Mutagenic (may cause mutations/ genetic change)
- Teratogenic (may cause birth defects)
- Other hazard/s (specify):

Possible route/s of exposure ☒:
- Eyes
- Skin
- Inhalation
- Ingestion/ swallowing
- Injection

Adequacy of current controls

Current controls are inadequate if not present when MSDS requires them or if not functioning well. A 'no' under OK means action is needed. Consider each control – does the MSDS recommend it, and is it present?

	Present	OK
Isolation	Yes No	Yes No
Local extraction ventilation	Yes No	Yes No
General ventilation	Yes No	Yes No
Natural ventilation	Yes No	Yes No
Other engineering controls	Yes No	Yes No
Safe work methods (eg pumping instead of pouring)	Yes No	Yes No
Reduce quantity and/or concentration	Yes No	Yes No
Information (at least MSDS and label)	Yes No	Yes No
Ongoing training (hazards, safe use, PPE, health surveillance if applicable)	Yes No	Yes No
Personal protective equipment (list):	Yes No	Yes No
Other measures		
First aid supplies/equipment (eg safety shower)	Yes No	Yes No
First aid training	Yes No	Yes No
Evacuation plan, emergency plan, and required emergency equipment	Yes No	Yes No
Other controls (specify):	Yes No	Yes No

Monitoring	Needed	Present	Results ok
Health surveillance program	Yes No	Yes No	Yes No
Air monitoring program	Yes No	Yes No	Yes No

Conclusion:☑
- Risks not significant now and not likely to increase
- Risks significant but effectively controlled at the moment
- Risks significant and not adequately controlled at the moment
- Uncertain about risks; more detailed assessment required

Action required to reduce risks: *(list changes needed, by when and by whom, attach further pages if needed)*
- Yes (specify): Date completed: Signature:
- No

Comments:

Assessment carried out by:	Signature:	Date:
Assessment approved by (person in charge):	Signature:	Date:

Next assessment due:

This form is provided by WorkSafeWA for assistance only and there is no legal requirement to use a particular format to record risk assessments.
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There is no legal requirement to use a specific template.

Find one you are comfortable with.

Take a look at your SDS.
In Section 2, “Hazards Identification”, are there any of these symbols?
They are usually, but not always, on the first page.




Any diamond appearing on an SDS that has a red outline, and a black diagram is a visual warning that the product is likely to be potentially harmful to your health.

There is also a very common symbol that implies environmental hazards, but we will concentrate on the human health aspects.

So, what should you do next?

READ Section 2 properly – it will provide you with more information about the potential hazards.

Check if the SDS identifies any significant health risks – for example, you might discover one or more of the following properties:

Fatal If swallowed
Toxic in contact with skin
Suspected of causing cancer
May impair fertility or cause harm to the unborn child

Not exactly ideal, but better to know what you are dealing with, than be oblivious to the hazards.

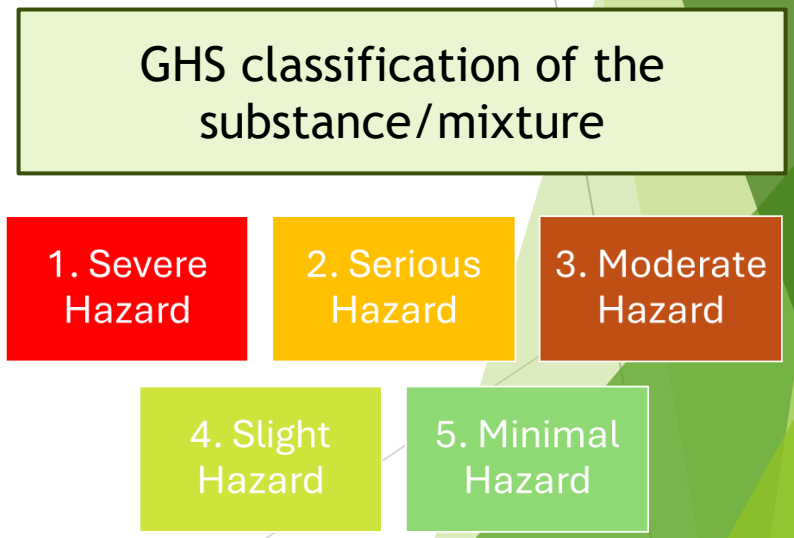
Far out! I'm only up to Section 2!

What do all these categories mean and should I even care!!???

Have a look at this text which is straight from an SDS

OT3 Acute Toxicity - Oral: Category 3
DT4 Acute Toxicity - Dermal: Category 4
SC-1B Skin Corrosion/Irritation: Category 1B
ED1 Eye Damage/Irritation: Category 1
SS-1 Sensitization - Skin: Category 1
CA2 Carcinogenicity: Category 2
TR2 Toxic to Reproduction: Category 2

Now have a look at the chart on the right -



In short - the LOWER the number the greater the risk.

While I’m on a roll and checking out any potential health hazards, I go to **Section 11of the SDS.**

This is where you get the “Toxicological Information” (including the LD50), and more detail on any potential chronic health hazards. Chronic poisoning is the stuff that creeps up on you over time – you may not even know that your health is being impacted until you receive bad news from your doctor. Things like cancer, birth defects, blood disorders and impaired fertility are some of the complications that can develop.

Have a quick look at **Section 15** – it will give you the Poison Schedule.

Using your template record any relevant info.

The LD50 is a significant figure located in Section 11.
It indicates the actual toxicity of the product.
The **LOWER** the LD50 the **MORE** toxic a product is.

The LD50 is measured in mg/kg of your body weight. 50mg is approximately 1/100th of a teaspoon.

The recorded figure is the amount of the pure active constituent that it takes to kill 50% of the lab animals in a single dose.

Paraquat has an Oral LD50 of 30mg/kg of body weight

Dormex has an Oral LD50 of 125mg/kg of body weight.

Glyphosate 450 has an Oral LD50 of >5000mg/kg

Did you know that Section 11 of the Genfarm Chlorpyrifos 500 EC insecticide SDS advises that:

“Other effects reported in workers repeatedly exposed, include impaired memory and concentration, disorientation, severe depressions, irritability, confusion, headache, speech difficulties, delayed reaction times, nightmares, sleepwalking, and drowsiness or insomnia”?

So, you have just discovered that your favourite, “go to” chemical – the one that you’ve been using for years, might not actually be very good for your health.

So what are you going to do now?

It might not be as bad as you think, providing you implement some risk control measures.

We now have a fair idea about how the product can harm us if we don't protect ourselves.
We need to take the time to check out the First Aid measures in Section 4.

Make sure you ALWAYS read this section very carefully.
Sometimes there are some very important anomalies to be found in this section.

Did you know that if you give supplemental oxygen to a person who has been impacted by Spray Seed, you will make them worse?

HOW DO I KNOW WHAT PPE I NEED TO USE?

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION, CAN HELP YOU WITH THAT.
You can also find this on the label in the "Safety Directions" segment. It won't have the fancy pictograms though – you will have to read it!




Where else do I need to look?

Check Section 5 – Fire-fighting measures - is it flammable?

Section 7 – Handling and Storage
Are there any special requirements?

Section 10 - Stability and Reactivity Does the SDS list any situations where the product might react dangerously with other chemicals in you workplace?

Now what?
Check the information you have collated:

Are you going to be pro-active about protecting yourself?

Do you have enough controls in place to help reduce the risk?

Do you have the correct PPE?
And more importantly, are you going to wear it!!?

Take into consideration the hazards you have identified, and the controls you will have in place.

What do you think the outcome is?
Which of these 4 scenarios is the best fit?

Risks are not significant now, and not likely to increase.

Risks are significant, but adequately controlled when label rate and all SDS restraints are complied with.

Risks are significant and not adequately controlled, or are you still uncertain about the risks, and require a more detailed risk assessment?

How you choose to proceed will be largely based on the outcome of your risk assessment.

You might decide that the product presents an unacceptable risk and choose to use a substitute product.
You might be happy to continue with the chosen product, because you now have enough information to enable you to protect yourself.
Whatever you decide, you will hopefully have enough knowledge to make an informed decision and stay safe.

Thank you for your time.