

Office of Education and Employment

Hazardous Substance Risk Assessment Guide for the Composites Industry





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References

Queensland legislation

- Workplace Health and Safety Regulation 1997 – Part 13 Hazardous Substances
- Workplace Health and Safety Code of Practice – Risk Management 2007
- Workplace Health and Safety Code of Practice – Hazardous Substances 2003
- Dangerous Goods Safety Management Regulation 2001

Australian Standards/New Zealand Standards

- AS/NZS 4360:2004 - Risk management
- HB 436:2004 - Risk management guidelines – Companion to AS/NZS 4360:2004
- AS 1319:1994 - Safety signs for the occupational environment

Material Safety Data Sheets (MSDS) – for various products.

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Hazardous Substance Risk Assessments

Queensland Workplace Health and Safety legislation requires that the risks from using a hazardous substance at work be assessed. A record of this assessment be made and kept and communicated to all personnel using the substance.

A hazardous substance risk assessment is a process of applying information about the substance to the way that it is used. The risk assessment will help you work out if the substance is being used safely, and if not – how to use it safely.

The benefits of preparing a written hazardous substance risk assessment are to:

- Provide the obligation holder with all details of chemicals used at the workplace
- Set the framework on information and training for workers
- Establish systems of work
- Create a safe environment in which to work.

This guide has been designed for the Composites Industry to provide:

- A step-by-step approach on how to do hazardous substance risk assessments
- A risk assessment template (Appendix A).

The supplement to this guide 'Generic Hazardous Substance Risk Assessments' provides example risk assessments on many hazardous substances used in the composites industry to assist operators in that industry. These risk assessments are generic only. Circumstances are different in every workshop therefore your risk assessments may be significantly different.

A register listing all hazardous substances must be kept in the workplace. A form for this purpose is also included (Appendix B).

Note: There may be hazardous substances used at your workplace that are not included in the supplement.



When to do a Hazardous Substance Risk Assessment:

Current hazardous substances used in the workplace:

Do a risk assessment:

- **Now**, if a risk assessment has not yet been done
- When there are **significant changes** to the way in which the substance is used
- When **new information** about the substance becomes available (refer to changes in the Material Safety Data Sheet – MSDS)
- When health surveillance or monitoring shows the **control measures are inadequate**
- When there are **changes** to control measures
- If it is **more than 5 years** after the last risk assessment was done for a substance.

New hazardous substances introduced to the workplace:

- **Before using** the substance.

Before doing your Hazardous Substance Risk Assessment:

Before starting on your hazardous substance risk assessments, you will need:

- A **current (less than 5 years old)** Material Safety Data Sheet (MSDS) for each hazardous substance used at your workplace. If you don't have an MSDS ask the supplier for a copy
- The **job tasks** where this substance is used. This should include:
 - How it is used. It may be necessary to do multiple risk assessment for the one substance if it is used in different ways and the exposures vary. For example, one risk assessment may be needed for mixing a substance and one for applying the substance
 - How much is used
 - How often it is used
- Information on any **safety controls** currently used in the workplace. This may be:
 - Engineering controls such as ventilation or dust extraction systems
 - Personal Protective Equipment (PPE)
- **Recorded information** on any injuries or illnesses caused by use of the substance. This may be from your workplace or other workplaces using the substance
- Information on **like or similar products**.

It is possible to group substances that are similar in their ingredients and how they are used. Therefore one risk assessment may cover a number of hazardous substances.

However it is essential to carefully check the MSDS for each substance to ensure all potential exposures and ingredients are covered in the risk assessment.

The Supplement to this guide provides risk assessments for generic products used within the composites industry. Information for the specific substances used in your workplace will need to be used for any risk assessment developed.



Before doing your Hazardous Substance Risk Assessment (Cont):

The generic risk assessments are:

- Polyester Resin and Gel Coats
 - Methyl Ethyl Ketone Peroxides (MEKP)
 - Glass and Carbon Fibre (Mat, Fabric, Continuous Strand Rovings)
 - Acetone
 - Fillers
 - Cobalt 6%
 - DMA (N,N-dimethylaniline)
 - Epoxy Resin Part A
 - Epoxy Resin Part B
 - Polyamine-Based Hardeners
 - Polyurethane Resins
 - Polyurethane Curing Agents
 - Mould Release Agents
-
- To check the MSDS for **hazardous substance classification**.
Check the MSDS for wording like **“Hazardous according to the criteria of NOHSC”**. If the substance is not classified as ‘hazardous’ it can still have effects on the health of people using it. The obligation on an employer to ensure the health and safety of employees are protected still applies. Therefore you will still need to assess and control the risks.
 - To **observe** what is actually done.
A risk assessment cannot be done by sitting at a desk. You will need to observe employees completing tasks and activities to collect sufficient information to complete a risk assessment. This may need to be done in stages.

How to do a Hazardous Substance Risk Assessment:

Using the risk assessment form attached to this guide (see appendix A) is one way of keeping a suitable hazardous substance risk assessment record.

However you can make your own record if you prefer (refer to the Workplace Health and Safety Regulation for what must be recorded and for further details on the risk assessment record).

The following guidance is provided to assist in completing the risk assessment form attached to this guide.



Business Name: _____ (Insert the name of your business here)

Example
Business Name: ABC Marine Company

Hazardous Substance Risk Assessments

Name of Substance

Insert the name of the hazardous substance.


If you are grouping a number of substances, write the 'group' name here and refer to an attachment where each substance is listed.

If you are doing more than one risk assessment for the one substance, e.g: one for mixing and one for application, you may refer to this in the name. For example, Mixing Epoxy Resin Part A.

You should also record the name of any related risk assessments to the one you are doing.

You may also select the relevant dangerous goods symbols and insert it below the name of the substance.



Example
Name of Substance: Epoxy Resin Part A

Related Risk Assessments: Epoxy Resin Part B

1. How is the substance used?

Describe the task in which the substance is used.

If the substance is used for a number of different tasks a risk assessment may be needed for each task.

Write a brief statement on how the substance or group of substances is used by employees.

Remember you must observe what your employees actually do with the substance.

Example
1. How is the substance used? – i.e. describe the task?
(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).
 Mixed with Epoxy Resin Part B and then sprayed or brushed onto finished surfaces.

2. How are people exposed to the substance?

Tick or mark the applicable routes of entry on exposure. Refer also to the MSDS.

There are four ways (routes of exposure) a hazardous substance can enter a person's body:

Skin – absorbed through the skin and affects other parts of the body or can affect the skin directly. The substance may be splashed straight onto the skin or onto clothes and then soaks through to the skin. The skin may come into contact with the substance through vapours, mists, fumes or dusts etc.

Eyes – This is the same as for skin. That is via splashes, vapours, fumes, mists or dusts. The substance may affect the eyes directly or can be absorbed through them.

Inhalation – the most problematic route of entry. This can be via vapours, mists, fumes or dusts etc which are breathed in and either do damage where they hit a surface in the respiratory system or are absorbed by the body and cause health problems.

Ingestion – the least common type of exposure and is caused by swallowing the substance.

Example

2. How are people exposed to the substance?

(Tick or mark applicable routes of entry)

Skin (splashed onto or absorbed through)	✓
Eyes (splashed onto or absorbed through)	✓
Inhalation (breathed in)	✓
Ingestion (swallowed)	✓

3. How much of the substance are workers exposed to during the task?

Record the actual amounts e.g: millilitres, milligrams, kilograms or grams, etc.

Observe several tasks being performed and record the amounts to which employees are exposed.

Example

3. How much of the substance are workers exposed to during the task?

(e.g: in litres/millilitres, kilograms/grams)

0.05millilitres per task

4. For how long are workers exposed to the substance?

Record the actual hours in a day and the number of days per week employees are exposed to the substance.

Do they use it every day for most of the day or is the substance used only occasionally?

Example

4. For how long are workers exposed to the substance?

(How often is the chemical used. e.g: in hours per day and days per week)

6 minutes per day 5 days per week

5. Briefly, what are the health effects of exposure to this substance?

(Refer to the MSDS)

Read through the MSDS and in particular the Health Hazard Information section.

The information in this section will relate directly to the routes of entry explained above in Question 2. Summarise and record the health effects from exposure to the substance.

You should also refer to the Poison Schedule on the MSDS for additional information.

Example

5. Briefly, what are the health effects of exposure to this substance?

(Refer to the MSDS)

Skin: May cause irritation, drying and cracking.

Eyes: Mild to moderate irritation on entering eye, if in eye for sometime product could swell and redden the eye.

Inhalation: Harmful if inhaled. Inhalation over long periods may cause nervous system impairment.

Ingestion: Harmful if ingested.

6. What engineering control measures are recommended?

(Refer to the MSDS)

Read through the MSDS and in particular the Precautions for Use section.

Summarise and record all relevant information on the risk assessment.

Example

6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended?

(Refer to the MSDS)

- Use in well-ventilated area
- Local ventilation is usually required to remove solvent fumes from areas.

7. Are any other control measures recommended?

(Refer to the MSDS)

Read through the MSDS. Summarise and record all relevant information on the risk assessment.

Other controls might include:

- Rotation of employees to minimise the length of exposure to each individual using the substance
- Using the substance out of hours to decrease how many people will be exposed
- Writing procedures on how to do the task safely
- Training and supervision of employees
- Clear access to fire fighting equipment and first aid equipment such as eye wash stations or first aid kits.

In this section of the Risk Assessment you may also insert the relevant fire extinguisher symbol and record other appropriate information.

Dangerous Goods Safety Management courses (Course No. 30308 and 30309) are available in Queensland.



Example

7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended?

(Refer to the MSDS)



On combustion, product may emit toxic fumes of Carbon Monoxide (CO).



- Fire fighting equipment supplied and serviced; spills kit and first aid available



- Training provided in the correct handling, storage, waste, spill and disposal procedures. Including operation of equipment involving the use of acetone.

8. Currently, what engineering control measures are used at your workplace to control exposure to the substance?

Engineering control measures are those that are a physical change to the work or machinery used or the workplace itself. For example, ventilation systems such as spray booths or extraction systems, use of barriers to isolate the area.

Example

8. Currently, what engineering controls are used to control exposure to the substance?

- For large jobs, temporary barricades are used when the substance is being sprayed onto surfaces
- Extraction fan is installed but currently not used.



9. If engineering controls are used, are they checked for effectiveness and are they maintained?

Review workplace practices to determine if the engineering controls are used by employees, that they are effective, and are maintained to ensure they are operational.

For example, checking air flow rates, servicing and maintaining extraction systems. You should also think about whether the controls used are the same, better or inferior to those recommended by the MSDS.

Example	
<p>9. If engineering controls are used, are they maintained and checked for effectiveness? <i>(Give Details)</i></p>	<ul style="list-style-type: none"> ■ No maintenance program or schedule in place ■ No review of effectiveness has been undertaken.










10. What personal protective equipment (PPE) is recommended?

(Refer to the MSDS)

The MSDS will list PPE to be worn when the substance is being used. It is important to record specific information about the PPE. For example record 'impervious gloves' rather than just 'gloves'.

You may also select the appropriate PPE symbol to highlight at a glance the types of PPE to be worn while doing the task. For example "Blue and White" coloured symbols indicate that it is mandatory to wear the PPE while in the area or while doing the task. "Yellow and Black" signs are cautionary notices warning of hazards and suggest actions to be exercised.



Example										
<p>10. What Personal Protective Equipment (PPE) is recommended? <i>(Refer to the MSDS)</i></p>	<table border="0"> <tr> <td style="text-align: center;"></td> <td style="padding-left: 10px;">Skin:</td> <td>Coveralls, chemical goggles, impervious gloves, safety boots</td> </tr> <tr> <td style="text-align: center;"></td> <td style="padding-left: 10px;">Eyes:</td> <td>Goggles or Face Shield</td> </tr> <tr> <td style="text-align: center;"></td> <td style="padding-left: 10px;">Inhalation:</td> <td>Canister Mask</td> </tr> </table>		Skin:	Coveralls, chemical goggles, impervious gloves, safety boots		Eyes:	Goggles or Face Shield		Inhalation:	Canister Mask
	Skin:	Coveralls, chemical goggles, impervious gloves, safety boots								
	Eyes:	Goggles or Face Shield								
	Inhalation:	Canister Mask								

11. Currently, what PPE is actually used?

Observe employees performing tasks and summarise what PPE they currently use.

Think about whether this is the same, better or inferior to that recommended by the MSDS.

Example							
<p>11. Currently, what PPE is used? <i>(Give Details)</i></p>	<table border="0"> <tr> <td style="padding-right: 10px;">Skin:</td> <td>Impervious gloves, safety boots</td> </tr> <tr> <td style="padding-right: 10px;">Eyes:</td> <td></td> </tr> <tr> <td style="padding-right: 10px;">Inhalation:</td> <td></td> </tr> </table>	Skin:	Impervious gloves, safety boots	Eyes:		Inhalation:	
Skin:	Impervious gloves, safety boots						
Eyes:							
Inhalation:							

12. Are any other control measures currently used at the workplace?

Summarise any other controls that are already in place but have not been written down anywhere else on this risk assessment.

Example

12. Are any other control measures currently used at the workplace?

No other controls are used.

13. What is the level of risk from use of this hazardous substance?

This question will require quite a lot of thought and analysis of the responses to all previous questions in the Risk Assessment.

There are two main elements in determining the level of risk associated with using a substance – consequence and likelihood.

Consequence is the outcome of an event, should it occur. In simple terms, the consequence to health and safety of employees may be expressed as:

- *Minor* – Ranging from first aid treatment to medical treatment required.
- *Moderate* – Short term hospitalisation and slight disability or impairment (<30%) to one or more persons.
- *Major* – Long term hospitalisation, disability or impairment (>30%) to one or more persons, or fatality.

In some cases the consequences may be unknown.

There may also be other consequences to consider, such as profit reduction, environmental damage, community reputation and legal. Where these consequences are real for a business a more detailed risk assessment needs to be undertaken.

Likelihood is the probability that the event will occur at some time. The exposure to a hazardous substance, that is the amount and duration employees are exposed to the substance will assist in determining the likelihood of an event occurring.

Likelihood in simple terms, may be expressed as:

- *Unlikely* – The event has or will occur from time to time, say once every 10 – 30 years. Or, exposure levels may be well below the TWA and STEL limitations set in the MSDS.
- *Possible* – The event has or will occur several times, say every 3 – 10 years. Or, use of the substance is equal to the TWA and STEL limitations set in the MSDS.
- *Likely* – The event has or will occur on an annual basis. Or, use of the substance exceeds the TWA and STEL limitations established in the MSDS.

In some cases, there may be insufficient information to determine the likelihood of an event occurring, that is it is unknown.

When evaluating the consequence and likelihood you should also refer to the MSDS for the TWA and STEL limitations.

TWA – Time Weighted Average. The time-weighted average airborne concentration over an eight hour day, for a five day working week that would not adversely affect most workers health over their working life.

STEL – Short Term Exposure Limit. The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health nor cause undue discomfort to, nearly all workers.

The TWA and STEL exposure standards stated in an MSDS are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. The exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

The **risk level** can be determined once the consequence and the likelihood have been established.

The matrix below shows the relationship between the *level of risk* and its components, *consequences* and *likelihood*.



15. What control measures will be implemented?

Compare the relevant control measures recommended in the MSDS with those used at your workplace.

Are the controls used at your workplace adequate to make sure the health and safety of employees is protected?

When considering control measures, the legislation requires that the most effective controls (as practicable) are used.

- (MOST EFFECTIVE) **Hierarchy of Control Measures**
Elimination
Substitution (with a less hazardous substance)
Engineer out the hazard by isolation
Engineer out the hazard by ventilation
Administrative controls (rotation, procedures etc)
 (LEAST EFFECTIVE) **PPE** – Personal Protective Equipment

The higher level control measures – elimination, substitution and engineering out the hazard – reduce the hazard at its source and therefore are more effective than the lower control measures – administrative controls and personal protection equipment – which just protect people from the hazard.

Elimination – If a hazardous substance isn't there it can't harm people. So if you can do without it, get rid of it.

Substitution – Chemical manufacturers are frequently developing new products that are less harmful and do the same job. Or there may be alternative processes that use less harmful chemicals.

Engineering out the hazard by isolation – For example, use of an automatic gun wash machine eliminates the need for workers to do it by hand.

Engineering out the hazard by ventilation – You might be able to remove vapours and fumes from the workplace through an exhaust ventilation system or by increasing the flow of fresh air into and/or through the area.

Administrative controls – You can minimise exposure through:

- Rotation of staff to minimise the length of exposure to each individual employee.
- Using the substance after hours so fewer people are exposed.
- Writing procedures on how to do the task.
- Training and supervision of employees.

Personal Protective Equipment (PPE) – Is PPE and clothing needed to protect the employee from the substance? People using PPE must be trained in how to use and maintain the equipment properly. PPE includes:

- Eye protection such as goggles or safety glasses.
- Skin protection such as gloves, coveralls, shoes.
- Respiratory protective equipment such as respirator, air supplied hood.
- Normally a combination of two or more types of control measures will be necessary to achieve adequate protection.

Example

15. What control measures will be implemented?

Hierarchy of Control Measures

- (MOST EFFECTIVE) **Elimination**
Substitution (with a less hazardous substance)
Engineer out the hazard by isolation
Engineer out the hazard by ventilation
Administrative controls (rotation, procedures etc)
 (LEAST EFFECTIVE) **PPE**

- Extraction fan to be inspected monthly and a maintenance schedule developed
- Employees trained in using the extraction fan
- Supervisor to use checklist to record that controls are being used
- Air monitoring to be carried out bi-annually to ensure exposure is within STEL and TWA limits
- Gloves to be worn (impervious)
- Goggles, to be worn.



16. Is health surveillance required?

Health surveillance is required if:

- Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health affect, or
- The level of risk from Question 13 is either moderate or high, and the substance contains or is one or more of the following (refer to the ingredients lists on the MSDS).

4,4' Methylenebis (2-chloroaniline) (MOCA)
Acrylonitrile
Asbestos
Benzene
Crystalline silica
Inorganic arsenic
Inorganic chromium

Inorganic mercury
Isocyanates
Organophosphate pesticides
Pentachlorophenol (PCP)
Polycyclic aromatic hydrocarbons (PAH)
Thallium
Vinyl chloride

Example

16. Is health surveillance required?

Health surveillance is required if:

- *Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or*
- *The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following:*

4,4' Methylenebis (2-chloroaniline) (MOCA)
Acrylonitrile
Asbestos
Benzene
Crystalline silica
Inorganic arsenic
Inorganic chromium

Inorganic mercury
Isocyanates
Organophosphate pesticides
Pentachlorophenol (PCP)
Polycyclic aromatic hydrocarbons (PAH)
Thallium
Vinyl chloride

- Nil required.

17. How are spills and waste managed?

The MSDS will contain information regarding how to clean up and manage spills and waste.

The Composites Safety Information chart also contains information on spill or leak procedures.

Example

17. How are spills and waste managed?

- Use water spray to disperse vapours
- Use absorbent material (kitty litter, sand, vermiculite) to clean up any spilt product
- Erect temporary bunds around area of large spills to contain substance.

18. How is the product to be stored?

The MSDS will contain information regarding how to store the substance.

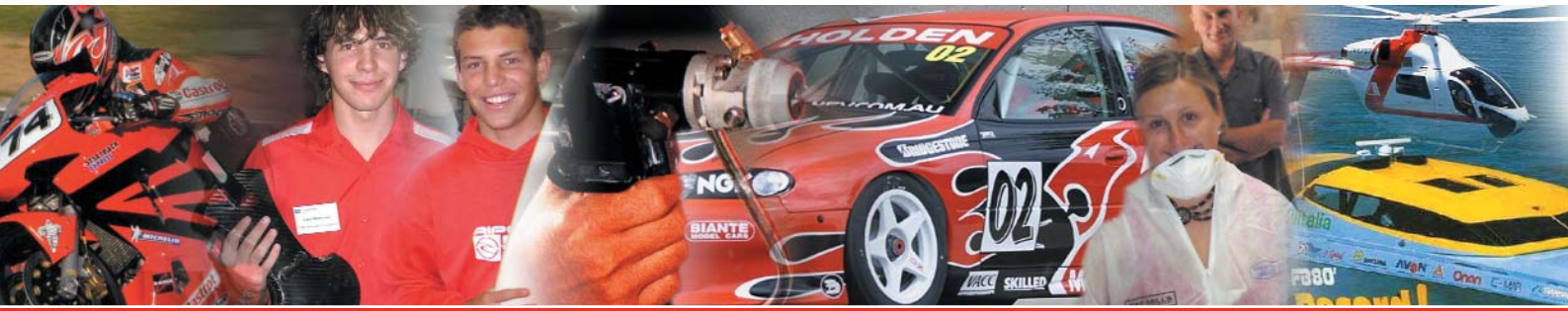
The Composites Safety Information chart also contains information on storage and handling.

Certain substances are not to be stored with or near each other. Check the information on the MSDS for any restrictions or precautions for the storage of dangerous goods.

Consideration should also be given to access to storage areas, for example only people who have been trained can enter storage facilities. Placement of the product in storage facilities must also be considered to reduce the risk associated with removing hazardous substances from storage areas. For example, storage of heavy drums above head height, as manual task issues may impact on accidental spills.



	<p>Example</p> <p>18. How is the product to be stored?</p>	<ul style="list-style-type: none"> ■ Cool well-ventilated area and away from flammables and strong oxidising agents ■ Kept in original container ■ Stored on mid shelf with shelf labelled.
<p>19. What is the correct disposal method for the product?</p>	<p>The MSDS may contain information regarding how to dispose of the substance.</p> <p>Local land waste management authorities should also be consulted prior to disposal of any hazardous substance and/or dangerous good.</p> <p>Where practicable, use registered and trained people to properly dispose of hazardous substances and/or dangerous goods.</p> <p>Example</p> <p>19. What is the correct disposal method for the product?</p> <p>ABC Hazardous Substance Waste removal contractors to be used to remove any waste or out of date product.</p>	
<p>20. Name of person/s conducting risk assessment?</p>	<p>Record the name or names of the people who conducted the risk assessment.</p> <p>This is useful for obtaining clarification on any information recorded in the risk assessment.</p> <p>Example</p> <p>20. Name of person/s conducting risk assessment?</p> <p>Jeff Smith Robert James</p>	
<p>21. Date of risk assessment?</p>	<p>Recording the date the risk assessment was undertaken helps in document control and in determining the credibility of the information.</p> <p>For example the information contained in a risk assessment completed more than 5 years ago may no longer be valid.</p> <p>Example</p> <p>21. Date of risk assessment?</p> <p>2 February, 2008.</p>	
<p>22. Review Date?</p>	<p>A review date will help to ensure the information contained in the risk assessment is current and accurate.</p> <p>As a minimum the review date will be at the expiry date of the MSDS. Where generic assessments are used the review date will be at the earliest expiry date of all MSDS used.</p> <p>The review date may also depend on an action plan for additional controls that are to be put in place as a result of the risk assessment. For example, air monitoring.</p> <p>Example</p> <p>22. Review Date?</p> <p>30 April, 2008 following results of air monitoring.</p>	



Office of Education and Employment

Appendix A

Risk Assessment Template





Business Name: _____

Hazardous Substance Risk Assessments

The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.



Name of Substance		
Related Risk Assessments:		
1. How is the substance used? – i.e. describe the task? <i>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</i>		
2. How are people exposed to the substance? <i>(Tick or mark applicable routes of entry)</i>	Skin (splashed onto or absorbed through)	
	Eyes (splashed onto or absorbed through)	
	Inhalation (breathed in)	
	Ingestion (swallowed)	
3. How much of the substance are workers exposed to during the task? <i>(e.g. in litres/millilitres, kilograms/grams)</i>		
4. For how long are workers exposed to the substance? <i>(How often is the chemical used. e.g. in hours per day and days per week)</i>		
5. Briefly, what are the health effects of exposure to this substance? <i>(Refer to the MSDS)</i>	Skin:	
	Eyes:	
	Inhalation:	
	Ingestion:	
6. What engineering control measures (e.g. extraction, ventilation, dilution ventilation) are recommended? <i>(Refer to the MSDS)</i>		



7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended?

(Refer to the MSDS)



8. Currently, what engineering controls are used to control exposure to the substance?

9. If engineering controls are used, are they maintained and checked for effectiveness?

(Give Details)

10. What Personal Protective Equipment (PPE) is recommended?

(Refer to the MSDS)



Skin:

Eyes:

Inhalation:

Ingestion:

11. Currently, what PPE is used?

(Give Details)

Skin:

Eyes:

Inhalation:

Ingestion:

12. Are any other control measures currently used at the workplace?

13. What is the level of risk from use of this hazardous substance?

TWA

STEL

Level of risk:

Explanation of why this risk level is chosen:

		Consequence			
		1 Unknown	2 Minor	3 Moderate	4 Major
Likelihood	A Likely	R	M	H	H
	B Possible	R	L	M	H
	C Unlikely	R	L	L	M
	D Unknown	R	L	M	H

H – High Risk. Use may be tolerable in some instances, but requires immediate controls.

M – Moderate Risk. Job should be okay to proceed after consideration of further risk reduction options.

L – Low Risk. Job okay to proceed in most circumstances.

R – Review Risk. Undertake further review before use.



<p>14. Does air monitoring need to be done?</p> <p>You can have air monitoring done to:</p> <ul style="list-style-type: none"> ■ find out how much your employees are being exposed to ■ find out if the controls being used are adequate to ensure employee's health and safety is protected. 	<p>(Refer also to MSDS)</p>		
<p>15. What control measures will be implemented?</p> <p>Hierarchy of Control Measures</p> <p>(MOST EFFECTIVE) Elimination</p> <p>Substitution (with a less hazardous substance)</p> <p>Engineer out the hazard by isolation</p> <p>Engineer out the hazard by ventilation</p> <p>Administrative controls (rotation, procedures etc)</p> <p>(LEAST EFFECTIVE) PPE</p>	<p>Give Details (if any)</p>		
<p>16. Is health surveillance required?</p> <p>Health surveillance is required if:</p> <ul style="list-style-type: none"> ■ If TWA and STEL limits are exceeded. ■ Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or ■ The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following: <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride </td> </tr> </table>	<ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium 	<ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride 	<p>Give Details (if any)</p>
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<p>17. How are spills and waste managed?</p>			
<p>18. How is the product to be stored?</p>			
<p>19. What is the correct disposal method for the product?</p>			
<p>20. Name of person/s conducting risk assessment?</p>			
<p>21. Date of risk assessment?</p>			
<p>22. Review Date?</p>			

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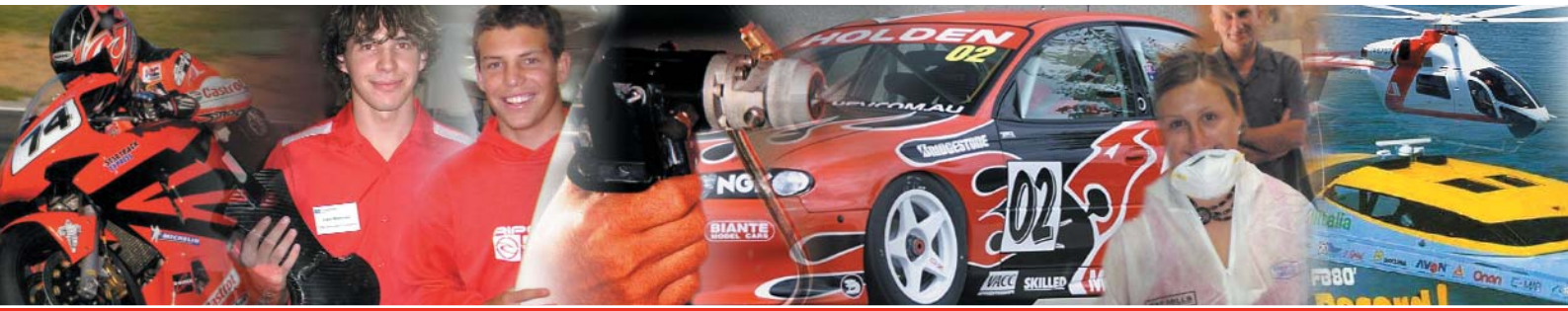


Office of Education and Employment

Appendix B

Chemical Register





Office of Education and Employment

Risk Assessment Forms Specific Substances





Business Name: _____

Hazardous Substance Risk Assessments








The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.



Related Risk Assessments:

<p>1. How is the substance used? – i.e. describe the task?</p> <p><i>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</i></p>	<ul style="list-style-type: none"> ■ Sprayed or brushed onto a surface 	
<p>2. How are people exposed to the substance?</p> <p><i>(Tick or mark applicable routes of entry)</i></p>	<p>Skin (splashed onto or absorbed through)</p>	<p>✓</p>
	<p>Eyes (splashed onto or absorbed through)</p>	<p>✓</p>
	<p>Inhalation (breathed in)</p>	<p>✓</p>
	<p>Ingestion (swallowed)</p>	<p>✓</p>
<p>3. How much of the substance are workers exposed to during the task?</p> <p><i>(e.g. in litres/millilitres, kilograms/grams)</i></p>		
<p>4. For how long are workers exposed to the substance?</p> <p><i>(How often is the chemical used. e.g. in hours per day and days per week)</i></p>		
<p>5. Briefly, what are the health effects of exposure to this substance?</p> <p><i>(Refer to the MSDS)</i></p>	<p>Skin: May cause irritation</p>	
	<p>Eyes: Mild to moderate irritation on entering eye, if in eye for sometime product could swell and redden the eye</p>	
	<p>Inhalation: Harmful if inhaled</p>	
	<p>Ingestion: Harmful if ingested</p>	
<p>6. What engineering control measures (e.g. extraction, ventilation, dilution ventilation) are recommended?</p> <p><i>(Refer to the MSDS)</i></p>	<ul style="list-style-type: none"> ■ Use in well-ventilated area ■ Local ventilation is usually required to remove solvent fumes from areas ■ Maintain vapour air levels below exposure limits. 	



<p>7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended? <i>(Refer to the MSDS)</i></p>	    <p>Decomposition products are toxic. Heat may cause violent rupture of containers if involved in a fire.</p> <ul style="list-style-type: none"> ■ Fire fighting equipment supplied and serviced; spill kit and first aid available ■ Training provided in the correct handling, storage, waste, spill and disposal procedures. Including operation of equipment involving the use of Polyester resin and gel coats ■ The environment surrounding applications must be free of all sources of ignition ■ Keep containers closed when not in use ■ Decanted materials to be labelled as per the original product.
<p>8. Currently, what engineering controls are used to control exposure to the substance?</p>	
<p>9. If engineering controls are used, are they maintained and checked for effectiveness? <i>(Give Details)</i></p>	<ul style="list-style-type: none"> ■ Training to be provided in the correct method of auditing and maintaining safety systems ■ Use of checklist for weekly/monthly Inspections.
<p>10. What Personal Protective Equipment (PPE) is recommended? <i>(Refer to the MSDS)</i></p>	 Skin: Coveralls, Chemical goggles, impervious gloves, Safety boots.  Eyes: Goggles or Face Shield  Inhalation: Low Level – Organic Respirator to AS 1715 and AS 1716 High Level – Breathing Apparatus
<p>11. Currently, what PPE is used? <i>(Give Details)</i></p>	<p>Skin:</p> <p>Eyes:</p> <p>Inhalation:</p> <p>Ingestion:</p>
<p>12. Are any other control measures currently used at the workplace?</p>	

<p>13. What is the level of risk from use of this hazardous substance?</p>	<p>TWA STEL</p> <p>Level of risk:</p> <p>Explanation of why this risk level is chosen:</p>
--	---

		Consequence			
		1 Unknown	2 Minor	3 Moderate	4 Major
Likelihood	A Likely	R	M	H	H
	B Possible	R	L	M	H
	C Unlikely	R	L	L	M
	D Unknown	R	L	M	H

H – High Risk. Use may be tolerable in some instances, but requires immediate controls.
 M – Moderate Risk. Job should be okay to proceed after consideration of further risk reduction options.
 L – Low Risk. Job okay to proceed in most circumstances.
 R – Review Risk. Undertake further review before use.



<p>14. Does air monitoring need to be done?</p> <p>You can have air monitoring done to:</p> <ul style="list-style-type: none"> ■ find out how much your employees are being exposed to ■ find out if the controls being used are adequate to ensure employee's health and safety is protected. 															
<p>15. What control measures will be implemented?</p> <p>Hierarchy of Control Measures</p> <p>(MOST EFFECTIVE) Elimination</p> <p>Substitution (with a less hazardous substance)</p> <p>Engineer out the hazard by isolation</p> <p>Engineer out the hazard by ventilation</p> <p>Administrative controls (rotation, procedures etc)</p> <p>(LEAST EFFECTIVE) PPE</p>	<p>Give Details (if any)</p> <ul style="list-style-type: none"> ■ A system in place to manage the storage & handling of polyester resin and gel coats. The system to include: <ul style="list-style-type: none"> • Training for employees on the safe handling and use of the product • Supervision to make sure these controls are being correctly used ■ Equipment to be regularly checked and maintained ■ Monitor exposure to ensure it is within STEL and TWA limits ■ Gloves to be worn (impervious). 														
<p>16. Is health surveillance required?</p> <p>Health surveillance is required if:</p> <ul style="list-style-type: none"> ■ If TWA and SteL limits are exceeded ■ Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or ■ The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following: <table border="0"> <tr> <td>4,4' Methylenebis (2-chloroaniline) (MOCA)</td> <td>Inorganic mercury</td> </tr> <tr> <td>Acrylonitrile</td> <td>Isocyanates</td> </tr> <tr> <td>Asbestos</td> <td>Organophosphate pesticides</td> </tr> <tr> <td>Benzene</td> <td>Pentachlorophenol (PCP)</td> </tr> <tr> <td>Crystalline silica</td> <td>Polycyclic aromatic hydrocarbons (PAH)</td> </tr> <tr> <td>Inorganic arsenic</td> <td>Thallium</td> </tr> <tr> <td>Inorganic chromium</td> <td>Vinyl chloride</td> </tr> </table>	4,4' Methylenebis (2-chloroaniline) (MOCA)	Inorganic mercury	Acrylonitrile	Isocyanates	Asbestos	Organophosphate pesticides	Benzene	Pentachlorophenol (PCP)	Crystalline silica	Polycyclic aromatic hydrocarbons (PAH)	Inorganic arsenic	Thallium	Inorganic chromium	Vinyl chloride	
4,4' Methylenebis (2-chloroaniline) (MOCA)	Inorganic mercury														
Acrylonitrile	Isocyanates														
Asbestos	Organophosphate pesticides														
Benzene	Pentachlorophenol (PCP)														
Crystalline silica	Polycyclic aromatic hydrocarbons (PAH)														
Inorganic arsenic	Thallium														
Inorganic chromium	Vinyl chloride														
<p>17. How are spills and waste to be managed?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Use absorbent material (kitty litter, sand, vermiculite) ■ Scrape up and deposit in suitable containers & label appropriately ■ Prevent contamination of waterways. 														
<p>18. How is the product to be stored?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Cool and well-ventilated area ■ Keep away from sources of ignition and strong oxidising agents ■ Do not transfer to unlabelled containers. 														
<p>19. What is the correct disposal method for the product?</p>	<ul style="list-style-type: none"> ■ Refer to local land waste management authority. 														
<p>20. Name of person/s conducting risk assessment?</p>															
<p>21. Date of risk assessment?</p>															
<p>22. Review Date?</p>															

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Business Name: _____

Hazardous Substance Risk Assessments

The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.



Related Risk Assessments:

1. How is the substance used?
– i.e. describe the task?

(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).

- An initiator, which is poured as a liquid in small quantities into unsaturated polyesters.

2. How are people exposed to the substance?

(Tick or mark applicable routes of entry)

Skin (splashed onto or absorbed through)	✓
Eyes (splashed onto or absorbed through)	✓
Inhalation (breathed in)	✓
Ingestion (swallowed)	✓

3. How much of the substance are workers exposed to during the task?

(e.g. in litres/millilitres, kilograms/grams)

4. For how long are workers exposed to the substance?

(How often is the chemical used. e.g. in hours per day and days per week)

5. Briefly, what are the health effects of exposure to this substance?

(Refer to the MSDS)

Skin:	Severe skin irritant
Eyes:	Contact causes severe corrosion and may cause blindness
Inhalation:	Moderately toxic and highly irritating to the respiratory tract
Ingestion:	May cause mucous membrane irritation and vertigo

6. What engineering control measures (e.g. extraction, ventilation, dilution ventilation) are recommended?

(Refer to the MSDS)

- Use in well-ventilated area
- Local ventilation is usually required to remove solvent fumes from areas
- Maintain vapour air levels below exposure limits.

7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended?

(Refer to the MSDS)



Note: MEKP catalyst is highly flammable
Refer to product MSDS for specific percentage range



Dry Chemical can cause MEKP to re-ignite. Rigid containers, e.g: glass or metal may rupture violently.



- Fire fighting equipment supplied and serviced; spill kit and first aid available
- Training provided in the correct handling, storage, waste, spill and disposal procedures. Including operation of equipment involving the use of MEKP
- The environment surrounding applications must be free of all sources of ignition
- Keep containers closed when not in use
- Decanted materials to be labelled as per the original product.

8. Currently, what engineering controls are used to control exposure to the substance?

9. If engineering controls are used, are they maintained and checked for effectiveness?

(Give Details)

- Training to be provided in the correct method of auditing and maintaining safety systems
- Use of checklist for weekly/monthly Inspections.

10. What Personal Protective Equipment (PPE) is recommended?

(Refer to the MSDS)



Skin: Coveralls, impervious gloves



Eyes: Goggles or Face Shield

11. Currently, what PPE is used?

(Give Details)

Skin:

Eyes:

Inhalation:

12. Are any other control measures currently used at the workplace?

13. What is the level of risk from use of this hazardous substance?

TWA _____ STEL _____

Level of risk:

Explanation of why this risk level is chosen:

		Consequence			
		1 Unknown	2 Minor	3 Moderate	4 Major
Likelihood	A Likely	R	M	H	H
	B Possible	R	L	M	H
	C Unlikely	R	L	L	M
	D Unknown	R	L	M	H

H – High Risk. Use may be tolerable in some instances, but requires immediate controls.

M – Moderate Risk. Job should be okay to proceed after consideration of further risk reduction options.

L – Low Risk. Job okay to proceed in most circumstances.

R – Review Risk. Undertake further review before use.

14. Does air monitoring need to be done?

You can have air monitoring done to:

- find out how much your employees are being exposed to
- find out if the controls being used are adequate to ensure employee's health and safety is protected.

15. What control measures will be implemented?

Hierarchy of Control Measures

(MOST EFFECTIVE) **Elimination**

Substitution (with a less hazardous substance)

Engineer out the hazard by isolation

Engineer out the hazard by ventilation

Administrative controls (rotation, procedures etc)

(LEAST EFFECTIVE) **PPE**

Give Details (if any)

- A system in place to manage the storage & handling of MEKP. The system to include:
 - Training for employees on the safe handling and use of the product
 - Supervision to make sure these controls are being correctly used
- Equipment to be regularly checked and maintained
- Monitor exposure to ensure it is within STEL and TWA limits
- Gloves to be worn (impervious)
- Goggles, overalls (or long sleeve shirt & trousers) to be worn.

16. Is health surveillance required?

Health surveillance is required if:

- If TWA and Stel limits are exceeded
- Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or
- The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following:

4,4' Methylenebis (2-chloroaniline) (MOCA)
Acrylonitrile
Asbestos
Benzene
Crystalline silica
Inorganic arsenic
Inorganic chromium

Inorganic mercury
Isocyanates
Organophosphate pesticides
Pentachlorophenol (PCP)
Polycyclic aromatic hydrocarbons (PAH)
Thallium
Vinyl chloride

17. How are spills and waste to be managed?

(Refer to the MSDS)

- Use absorbent material (kitty litter, sand, vermiculite)
- Scrape up and deposit in suitable containers & label appropriately
- Prevent contamination of waterways.

18. How is the product to be stored?

(Refer to the MSDS)

- Cool and away from flammables, strong oxidising and reducing agents especially cobalt 6% and DMA
- Keep in original container
- Avoid contact with metallic materials.

19. What is the correct disposal method for the product?

- Refer to local land waste management authority.

20. Name of person/s conducting risk assessment?

21. Date of risk assessment?

22. Review Date?

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Business Name: _____

Hazardous Substance Risk Assessments

The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.

Related Risk Assessments:

<p>1. How is the substance used? – i.e. describe the task?</p> <p><i>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</i></p>	<ul style="list-style-type: none"> ■ Placed on various surfaces or moulds and wetted through with polyester or epoxy resins to form a hard coating. 	
<p>2. How are people exposed to the substance?</p> <p><i>(Tick or mark applicable routes of entry)</i></p>	<p>Skin (splashed onto or absorbed through)</p>	<p>✓</p>
	<p>Eyes (splashed onto or absorbed through)</p>	<p>✓</p>
	<p>Inhalation (breathed in)</p>	<p>✓</p>
	<p>Ingestion (swallowed)</p>	<p>✓</p>
<p>3. How much of the substance are workers exposed to during the task?</p> <p><i>(e.g. in litres/millilitres, kilograms/grams)</i></p>		
<p>4. For how long are workers exposed to the substance?</p> <p><i>(How often is the chemical used. e.g. in hours per day and days per week)</i></p>		
<p>5. Briefly, what are the health effects of exposure to this substance?</p> <p><i>(Refer to the MSDS)</i></p>	<p>Skin: May cause irritation, mainly confined to cutting and sanding</p>	
	<p>Eyes: Mild to moderate irritation on entering eye</p>	
	<p>Inhalation: Not respirable, but dust masks may be beneficial in areas of high dust content</p>	
	<p>Ingestion:</p>	
<p>6. What engineering control measures (e.g. extraction, ventilation, dilution ventilation) are recommended?</p> <p><i>(Refer to the MSDS)</i></p>	<ul style="list-style-type: none"> ■ Maintain dust levels below exposure limits ■ Use in well-ventilated area. 	



<p>7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended? <i>(Refer to the MSDS)</i></p>	<ul style="list-style-type: none"> ■ Spill kit and first aid available ■ Training provided in the correct handling, storage, waste, spill and disposal procedures. Including operation of equipment involving the use of the glass and carbon fibre material ■ The environment surrounding applications must be free of all sources of ignition ■ Minimise skin contact and avoid inhaling particulate material. 									
<p>8. Currently, what engineering controls are used to control exposure to the substance?</p>										
<p>9. If engineering controls are used, are they maintained and checked for effectiveness? <i>(Give Details)</i></p>	<ul style="list-style-type: none"> ■ Training to be provided in the correct method of auditing and maintaining safety systems ■ Use of checklist for weekly/monthly Inspections. 									
<p>10. What Personal Protective Equipment (PPE) is recommended? <i>(Refer to the MSDS)</i></p>	<table border="0"> <tr> <td data-bbox="571 990 758 1079"> </td> <td data-bbox="778 1016 826 1048">Skin:</td> <td data-bbox="906 1016 1452 1048">Coveralls, chemical goggles, gloves, safety boots</td> </tr> <tr> <td data-bbox="571 1093 662 1182"> </td> <td data-bbox="778 1115 833 1146">Eyes:</td> <td data-bbox="906 1115 1002 1146">Goggles</td> </tr> <tr> <td data-bbox="571 1196 662 1285"> </td> <td data-bbox="778 1218 896 1249">Inhalation:</td> <td data-bbox="906 1218 1129 1249">Disposable air mask</td> </tr> </table>		Skin:	Coveralls, chemical goggles, gloves, safety boots		Eyes:	Goggles		Inhalation:	Disposable air mask
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	Eyes:	Goggles								
	Inhalation:	Disposable air mask								
<p>11. Currently, what PPE is used? <i>(Give Details)</i></p>	<p>Skin:</p> <hr/> <p>Eyes:</p> <hr/> <p>Inhalation:</p>									
<p>12. Are any other control measures currently used at the workplace?</p>										

<p>13. What is the level of risk from use of this hazardous substance?</p>	<p>TWA _____ STEL _____</p> <p>Level of risk:</p> <p>Explanation of why this risk level is chosen:</p>																															
<table border="1"> <thead> <tr> <th colspan="2" rowspan="2"></th> <th colspan="4">Consequence</th> </tr> <tr> <th>1 Unknown</th> <th>2 Minor</th> <th>3 Moderate</th> <th>4 Major</th> </tr> </thead> <tbody> <tr> <th rowspan="4">Likelihood</th> <th>A Likely</th> <td>R</td> <td>M</td> <td>H</td> <td>H</td> </tr> <tr> <th>B Possible</th> <td>R</td> <td>L</td> <td>M</td> <td>H</td> </tr> <tr> <th>C Unlikely</th> <td>R</td> <td>L</td> <td>L</td> <td>M</td> </tr> <tr> <th>D Unknown</th> <td>R</td> <td>L</td> <td>M</td> <td>H</td> </tr> </tbody> </table>			Consequence				1 Unknown	2 Minor	3 Moderate	4 Major	Likelihood	A Likely	R	M	H	H	B Possible	R	L	M	H	C Unlikely	R	L	L	M	D Unknown	R	L	M	H	
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H – High Risk. Use may be tolerable in some instances, but requires immediate controls.
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R – Review Risk. Undertake further review before use.



<p>14. Does air monitoring need to be done?</p> <p>You can have air monitoring done to:</p> <ul style="list-style-type: none"> ■ find out how much your employees are being exposed to ■ find out if the controls being used are adequate to ensure employee's health and safety is protected. 	<p>Air monitoring to be carried out annually.</p>		
<p>15. What control measures will be implemented?</p> <p>Hierarchy of Control Measures</p> <p>(MOST EFFECTIVE) Elimination</p> <p>Substitution (with a less hazardous substance)</p> <p>Engineer out the hazard by isolation</p> <p>Engineer out the hazard by ventilation</p> <p>Administrative controls (rotation, procedures etc)</p> <p>(LEAST EFFECTIVE) PPE</p>	<p>Give Details (if any)</p> <ul style="list-style-type: none"> ■ A system in place to manage the storage & handling of glass and carbon fibre materials. The system to include: <ul style="list-style-type: none"> • Training for employees on the safe handling and use of the product • Supervision to make sure these controls are being correctly used ■ Equipment to be regularly checked and maintained ■ Monitor exposure to ensure it is within STEL and TWA limits ■ Gloves to be worn (impervious) ■ Goggles, overalls (or long sleeve shirt & trousers) to be worn. 		
<p>16. Is health surveillance required?</p> <p>Health surveillance is required if:</p> <ul style="list-style-type: none"> ■ If TWA and SteL limits are exceeded ■ Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or ■ The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following: <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride </td> </tr> </table>	<ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium 	<ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride 	
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<p>17. How are spills and waste to be managed?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Dampen with water and sweep up or vacuum ■ Scrape up and contain in plastic garbage bags & label appropriately ■ Prevent contamination of waterways. 		
<p>18. How is the product to be stored?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Store in a dry place. 		
<p>19. What is the correct disposal method for the product?</p>	<ul style="list-style-type: none"> ■ Refer to local land waste management authority. 		
<p>20. Name of person/s conducting risk assessment?</p>			
<p>21. Date of risk assessment?</p>			
<p>22. Review Date?</p>			

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Business Name: _____

Hazardous Substance Risk Assessments

The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.



Related Risk Assessments:

1. How is the substance used?
– i.e. describe the task?

(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).

- Used in cleaning resin solutions from equipment.

2. How are people exposed to the substance?

(Tick or mark applicable routes of entry)

Skin (splashed onto or absorbed through)	✓
Eyes (splashed onto or absorbed through)	✓
Inhalation (breathed in)	✓
Ingestion (swallowed)	✓

3. How much of the substance are workers exposed to during the task?

(e.g: in litres/millilitres, kilograms/grams)

4. For how long are workers exposed to the substance?

(How often is the chemical used. e.g: in hours per day and days per week)

5. Briefly, what are the health effects of exposure to this substance?

(Refer to the MSDS)

Skin:	Mild irritation. Prolonged or repeated exposure may cause dryness or cracking
Eyes:	May cause moderate to severe eye irritation and corneal damage
Inhalation:	Moderate irritation to the nose and throat
Ingestion:	Prolonged contact may cause irritant contact dermatitis

6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended?

(Refer to the MSDS)

- Use in well-ventilated area
- Local ventilation is usually required to remove solvent fumes from areas
- Maintain vapour air levels below exposure limits.



<p>14. Does air monitoring need to be done?</p> <p>You can have air monitoring done to:</p> <ul style="list-style-type: none"> ■ find out how much your employees are being exposed to ■ find out if the controls being used are adequate to ensure employee's health and safety is protected. 															
<p>15. What control measures will be implemented?</p> <p>Hierarchy of Control Measures</p> <p>(MOST EFFECTIVE) Elimination</p> <p>Substitution (with a less hazardous substance)</p> <p>Engineer out the hazard by isolation</p> <p>Engineer out the hazard by ventilation</p> <p>Administrative controls (rotation, procedures etc)</p> <p>(LEAST EFFECTIVE) PPE</p>	<p>Give Details (if any)</p> <ul style="list-style-type: none"> ■ A system in place to manage the storage & handling of Acetone. The system to include: <ul style="list-style-type: none"> • Training for employees on the safe handling and use of the product • Supervision to make sure these controls are being correctly used ■ Equipment to be regularly checked and maintained ■ Monitor exposure to ensure it is within STEL and TWA limits ■ Gloves to be worn (impervious) ■ Goggles, overalls (or long sleeve shirt & trousers) to be worn. 														
<p>16. Is health surveillance required?</p> <p>Health surveillance is required if:</p> <ul style="list-style-type: none"> ■ If TWA and Stel limits are exceeded ■ Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or ■ The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following: <table border="0"> <tr> <td>4,4' Methylenebis (2-chloroaniline) (MOCA)</td> <td>Inorganic mercury</td> </tr> <tr> <td>Acrylonitrile</td> <td>Isocyanates</td> </tr> <tr> <td>Asbestos</td> <td>Organophosphate pesticides</td> </tr> <tr> <td>Benzene</td> <td>Pentachlorophenol (PCP)</td> </tr> <tr> <td>Crystalline silica</td> <td>Polycyclic aromatic hydrocarbons (PAH)</td> </tr> <tr> <td>Inorganic arsenic</td> <td>Thallium</td> </tr> <tr> <td>Inorganic chromium</td> <td>Vinyl chloride</td> </tr> </table>	4,4' Methylenebis (2-chloroaniline) (MOCA)	Inorganic mercury	Acrylonitrile	Isocyanates	Asbestos	Organophosphate pesticides	Benzene	Pentachlorophenol (PCP)	Crystalline silica	Polycyclic aromatic hydrocarbons (PAH)	Inorganic arsenic	Thallium	Inorganic chromium	Vinyl chloride	
4,4' Methylenebis (2-chloroaniline) (MOCA)	Inorganic mercury														
Acrylonitrile	Isocyanates														
Asbestos	Organophosphate pesticides														
Benzene	Pentachlorophenol (PCP)														
Crystalline silica	Polycyclic aromatic hydrocarbons (PAH)														
Inorganic arsenic	Thallium														
Inorganic chromium	Vinyl chloride														
<p>17. How are spills and waste to be managed?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Use water spray to disperse vapours ■ Use absorbent material (kitty litter, sand, vermiculite) ■ Prevent contamination of waterways. 														
<p>18. How is the product to be stored?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Cool well-ventilated area and away from flammables and strong oxidising agents ■ Keep in original container ■ Plastics unsuitable as storage and handling materials. 														
<p>19. What is the correct disposal method for the product?</p>	<ul style="list-style-type: none"> ■ Refer to local land waste management authority 														
<p>20. Name of person/s conducting risk assessment?</p>															
<p>21. Date of risk assessment?</p>															
<p>22. Review Date?</p>															

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Business Name: _____

Hazardous Substance Risk Assessments

The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.

Related Risk Assessments:

1. How is the substance used?
– i.e. describe the task?

(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).

- Generally applied by spatula or trowel to surface.

2. How are people exposed to the substance?

(Tick or mark applicable routes of entry)

Skin (splashed onto or absorbed through)	✓
Eyes (splashed onto or absorbed through)	✓
Inhalation (breathed in)	✓
Ingestion (swallowed)	✓

3. How much of the substance are workers exposed to during the task?

(e.g. in litres/millilitres, kilograms/grams)

4. For how long are workers exposed to the substance?

(How often is the chemical used. e.g. in hours per day and days per week)

5. Briefly, what are the health effects of exposure to this substance?

(Refer to the MSDS)

Skin:	May cause irritation
Eyes:	Moderate irritation on entering eye, if in eye for sometime product could swell and redden the eye
Inhalation:	Harmful if inhaled
Ingestion:	Harmful if ingested

6. What engineering control measures (e.g. extraction, ventilation, dilution ventilation) are recommended?

(Refer to the MSDS)

- Use in well-ventilated area
- Local ventilation is usually required to remove vapour fumes from areas
- Maintain vapour air levels below exposure limits.



<p>7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended? <i>(Refer to the MSDS)</i></p>	<ul style="list-style-type: none"> ■ Spill kit and first aid available ■ Training provided in the correct handling, storage, waste, spill and disposal procedures. Including operation of equipment involving the use of the fillers ■ The environment surrounding applications must be free of all sources of ignition ■ Keep containers closed when not in use ■ Decanted materials to be labelled as per the original product. 												
<p>8. Currently, what engineering controls are used to control exposure to the substance?</p>													
<p>9. If engineering controls are used, are they maintained and checked for effectiveness? <i>(Give Details)</i></p>	<ul style="list-style-type: none"> ■ Training to be provided in the correct method of auditing and maintaining safety systems ■ Use of checklist for weekly/monthly Inspections. 												
<p>10. What Personal Protective Equipment (PPE) is recommended? <i>(Refer to the MSDS)</i></p>	<table border="0"> <tr> <td data-bbox="576 949 660 1039"></td> <td data-bbox="671 981 756 1039"></td> <td data-bbox="778 981 826 1003">Skin:</td> <td data-bbox="906 981 1437 1039">Coveralls, Chemical goggles, impervious gloves, Leather boots</td> </tr> <tr> <td data-bbox="576 1061 660 1151"></td> <td></td> <td data-bbox="778 1070 826 1093">Eyes:</td> <td data-bbox="906 1070 1161 1093">Goggles or Face Shield</td> </tr> <tr> <td data-bbox="576 1173 660 1263"></td> <td></td> <td data-bbox="778 1173 900 1196">Inhalation:</td> <td data-bbox="906 1173 1417 1263">Low Level – Organic Respirator to AS 1715 and AS 1716 or as listed by the MSDS. High Level – Breathing Apparatus</td> </tr> </table>			Skin:	Coveralls, Chemical goggles, impervious gloves, Leather boots			Eyes:	Goggles or Face Shield			Inhalation:	Low Level – Organic Respirator to AS 1715 and AS 1716 or as listed by the MSDS. High Level – Breathing Apparatus
		Skin:	Coveralls, Chemical goggles, impervious gloves, Leather boots										
		Eyes:	Goggles or Face Shield										
		Inhalation:	Low Level – Organic Respirator to AS 1715 and AS 1716 or as listed by the MSDS. High Level – Breathing Apparatus										
<p>11. Currently, what PPE is used? <i>(Give Details)</i></p>	<p>Skin:</p> <p>Eyes:</p> <p>Inhalation:</p> <p>Ingestion:</p>												
<p>12. Are any other control measures currently used at the workplace?</p>													

<p>13. What is the level of risk from use of this hazardous substance?</p>	<p>TWA</p> <p>STEL</p> <p>Level of risk:</p> <p>Explanation of why this risk level is chosen:</p>
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		Consequence			
		1 Unknown	2 Minor	3 Moderate	4 Major
Likelihood	A Likely	R	M	H	H
	B Possible	R	L	M	H
	C Unlikely	R	L	L	M
	D Unknown	R	L	M	H

H – High Risk. Use may be tolerable in some instances, but requires immediate controls.
M – Moderate Risk. Job should be okay to proceed after consideration of further risk reduction options.
L – Low Risk. Job okay to proceed in most circumstances.
R – Review Risk. Undertake further review before use.



<p>14. Does air monitoring need to be done?</p> <p>You can have air monitoring done to:</p> <ul style="list-style-type: none"> ■ find out how much your employees are being exposed to ■ find out if the controls being used are adequate to ensure employee's health and safety is protected. 			
<p>15. What control measures will be implemented?</p> <p>Hierarchy of Control Measures</p> <p>(MOST EFFECTIVE) Elimination</p> <p>Substitution (with a less hazardous substance)</p> <p>Engineer out the hazard by isolation</p> <p>Engineer out the hazard by ventilation</p> <p>Administrative controls (rotation, procedures etc)</p> <p>(LEAST EFFECTIVE) PPE</p>	<p>Give Details (if any)</p> <ul style="list-style-type: none"> ■ A system in place to manage the storage & handling of fillers. The system to include: <ul style="list-style-type: none"> • Training for employees on the safe handling and use of the product • Supervision to make sure these controls are being correctly used ■ Equipment to be regularly checked and maintained ■ Monitor exposure to ensure it is within STEL and TWA limits ■ Gloves to be worn (impervious). 		
<p>16. Is health surveillance required?</p> <p>Health surveillance is required if:</p> <ul style="list-style-type: none"> ■ If TWA and Stel limits are exceeded ■ Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or ■ The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following: <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride </td> </tr> </table>	<ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium 	<ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride 	
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<p>17. How are spills and waste to be managed?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Sweep and shovel solids into container ■ Use approved vacuum to clean up residue ■ Prevent contamination of waterways. 		
<p>18. How is the product to be stored?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Store in a dry place ■ Do not transfer to unlabelled containers. 		
<p>19. What is the correct disposal method for the product?</p>	<ul style="list-style-type: none"> ■ Refer to local land waste management authority. 		
<p>20. Name of person/s conducting risk assessment?</p>			
<p>21. Date of risk assessment?</p>			
<p>22. Review Date?</p>			

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Business Name: _____

Hazardous Substance Risk Assessments

The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.



Related Risk Assessments:

<p>1. How is the substance used? – i.e. describe the task?</p> <p><i>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</i></p>	<ul style="list-style-type: none"> ■ Accelerator or promoter in curing unsaturated polyester resins ■ Mixed for spray or hand brushing. 	
<p>2. How are people exposed to the substance?</p> <p><i>(Tick or mark applicable routes of entry)</i></p>	<p>Skin (splashed onto or absorbed through) ✓</p>	
	<p>Eyes (splashed onto or absorbed through) ✓</p>	
	<p>Inhalation (breathed in) ✓</p>	
	<p>Ingestion (swallowed) ✓</p>	
<p>3. How much of the substance are workers exposed to during the task?</p> <p><i>(e.g. in litres/millilitres, kilograms/grams)</i></p>		
<p>4. For how long are workers exposed to the substance?</p> <p><i>(How often is the chemical used. e.g. in hours per day and days per week)</i></p>		
<p>5. Briefly, what are the health effects of exposure to this substance?</p> <p><i>(Refer to the MSDS)</i></p>	<p>Skin: Irritation, dryness and cracking. Contact dermatitis</p>	
	<p>Eyes: Mild irritation on eye</p>	
	<p>Inhalation: Harmful if inhaled. Inhalation may cause irritation to nose and throat Can effect central nervous system</p>	
	<p>Ingestion: Harmful if ingested. Repeated or prolonged contact may cause contact dermatitis</p>	
<p>6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended?</p> <p><i>(Refer to the MSDS)</i></p>	<ul style="list-style-type: none"> ■ Use in well-ventilated area ■ Local ventilation is usually required to remove vapour fumes from areas ■ Maintain vapour air levels below exposure limits. 	



<p>14. Does air monitoring need to be done?</p> <p>You can have air monitoring done to:</p> <ul style="list-style-type: none"> ■ find out how much your employees are being exposed to ■ find out if the controls being used are adequate to ensure employee's health and safety is protected. 			
<p>15. What control measures will be implemented?</p> <p>Hierarchy of Control Measures</p> <p>(MOST EFFECTIVE) Elimination</p> <p>Substitution (with a less hazardous substance)</p> <p>Engineer out the hazard by isolation</p> <p>Engineer out the hazard by ventilation</p> <p>Administrative controls (rotation, procedures etc)</p> <p>(LEAST EFFECTIVE) PPE</p>	<p>Give Details (if any)</p> <ul style="list-style-type: none"> ■ A system in place to manage the storage & handling of Cobalt 6%. The system to include: <ul style="list-style-type: none"> • Training for employees on the safe handling and use of the product • Supervision to make sure these controls are being correctly used ■ Equipment to be regularly checked and maintained ■ Monitor exposure to ensure it is within STEL and TWA limits ■ Gloves to be worn (impervious). 		
<p>16. Is health surveillance required?</p> <p>Health surveillance is required if:</p> <ul style="list-style-type: none"> ■ If TWA and Stel limits are exceeded ■ Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or ■ The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following: <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride </td> </tr> </table>	<ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium 	<ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride 	
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<p>17. How are spills and waste to be managed?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Use absorbent material (kitty litter, sand, vermiculite) ■ Prevent contamination of waterways. 		
<p>18. How is the product to be stored?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Cool well-ventilated area away from all sources of ignition ■ Keep away from strong oxidising agents, heat and flame ■ Do not transfer to unlabelled containers. 		
<p>19. What is the correct disposal method for the product?</p>	<ul style="list-style-type: none"> ■ Refer to local land waste management authority. 		
<p>20. Name of person/s conducting risk assessment?</p>			
<p>21. Date of risk assessment?</p>			
<p>22. Review Date?</p>			

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Business Name: _____

Hazardous Substance Risk Assessments




The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.



Related Risk Assessments:

<p>1. How is the substance used? – i.e. describe the task?</p> <p><i>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</i></p>	<ul style="list-style-type: none"> ■ Catalytic hardener mixed with unsaturated polyester resins and then sprayed or brushed on to surfaces. 	
<p>2. How are people exposed to the substance?</p> <p><i>(Tick or mark applicable routes of entry)</i></p>	<p>Skin (splashed onto or absorbed through)</p> <p>Eyes (splashed onto or absorbed through)</p> <p>Inhalation (breathed in)</p> <p>Ingestion (swallowed)</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>
<p>3. How much of the substance are workers exposed to during the task?</p> <p><i>(e.g: in litres/millilitres, kilograms/grams)</i></p>		
<p>4. For how long are workers exposed to the substance?</p> <p><i>(How often is the chemical used. e.g: in hours per day and days per week)</i></p>		
<p>5. Briefly, what are the health effects of exposure to this substance?</p> <p><i>(Refer to the MSDS)</i></p>	<p>Skin: Irritation. Can be absorbed readily through skin causing cyanosis, increased pulse, headaches cardiac arrest</p> <p>Eyes: Can cause burns to eye</p> <p>Inhalation: Harmful if inhaled. Vapours can be absorbed into bloodstream, can cause cyanosis, increased pulse, headaches, cardiac arrest</p> <p>Ingestion: Harmful if ingested. Repeated or prolonged contact may cause health and blood irregularities</p>	
<p>6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended?</p> <p><i>(Refer to the MSDS)</i></p>	<ul style="list-style-type: none"> ■ Use in well-ventilated area ■ Local ventilation is usually required to remove vapour fumes from areas ■ Maintain vapour air levels below exposure limits 	



<p>7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended? <i>(Refer to the MSDS)</i></p>	 <ul style="list-style-type: none"> ■ Fire fighting equipment supplied and serviced; spill kit and first aid available ■ Training provided in the correct handling, storage, waste, spill and disposal procedures. Including operation of equipment involving the use of DMA ■ The environment surrounding applications must be free of all sources of ignition ■ Keep containers closed when not in use ■ Decanted materials to be labelled as per the original product.
<p>8. Currently, what engineering controls are used to control exposure to the substance?</p>	
<p>9. If engineering controls are used, are they maintained and checked for effectiveness? <i>(Give Details)</i></p>	<ul style="list-style-type: none"> ■ Training to be provided in the correct method of auditing and maintaining safety systems ■ Use of checklist for weekly/monthly Inspections.
<p>10. What Personal Protective Equipment (PPE) is recommended? <i>(Refer to the MSDS)</i></p>	<div style="display: flex; align-items: center; margin-bottom: 10px;">  <div style="margin-left: 20px;"> <p>Skin: Coveralls, impervious gloves, Safety boots</p> </div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;">  <div style="margin-left: 20px;"> <p>Eyes: Goggles or Face Shield</p> </div> </div> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>Inhalation: Canister Mask</p> </div> </div>
<p>11. Currently, what PPE is used? <i>(Give Details)</i></p>	<p>Skin:</p> <p>Eyes:</p> <p>Inhalation:</p> <p>Ingestion:</p>
<p>12. Are any other control measures currently used at the workplace?</p>	

<p>13. What is the level of risk from use of this hazardous substance?</p>	<p>TWA STEL</p> <p>Level of risk:</p> <p>Explanation of why this risk level is chosen:</p>
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		Consequence			
		1 Unknown	2 Minor	3 Moderate	4 Major
Likelihood	A Likely	R	M	H	H
	B Possible	R	L	M	H
	C Unlikely	R	L	L	M
	D Unknown	R	L	M	H

H – High Risk. Use may be tolerable in some instances, but requires immediate controls.
M – Moderate Risk. Job should be okay to proceed after consideration of further risk reduction options.
L – Low Risk. Job okay to proceed in most circumstances.
R – Review Risk. Undertake further review before use.

14. Does air monitoring need to be done?

You can have air monitoring done to:

- find out how much your employees are being exposed to
- find out if the controls being used are adequate to ensure employee's health and safety is protected.

15. What control measures will be implemented?

Hierarchy of Control Measures

(MOST EFFECTIVE) **Elimination**

Substitution (with a less hazardous substance)

Engineer out the hazard by isolation

Engineer out the hazard by ventilation

Administrative controls (rotation, procedures etc)

(LEAST EFFECTIVE) **PPE**

Give Details (if any)

- A system in place to manage the storage & handling of DMA.
The system to include:
 - Training for employees on the safe handling and use of the product
 - Supervision to make sure these controls are being correctly used
- Equipment to be regularly checked and maintained
- Monitor exposure to ensure it is within STEL and TWA limits
- Gloves to be worn (impervious)
- Goggles, overalls (or long sleeve shirt & trousers) to be worn.

16. Is health surveillance required?

Health surveillance is required if:

- If TWA and SteL limits are exceeded
- Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or
- The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following:

4,4' Methylenebis (2-chloroaniline) (MOCA)
Acrylonitrile
Asbestos
Benzene
Crystalline silica
Inorganic arsenic
Inorganic chromium

Inorganic mercury
Isocyanates
Organophosphate pesticides
Pentachlorophenol (PCP)
Polycyclic aromatic hydrocarbons (PAH)
Thallium
Vinyl chloride

17. How are spills and waste to be managed? (Refer to the MSDS)

- Use absorbent material (kitty litter, sand, vermiculite)
- Prevent contamination of waterways.

18. How is the product to be stored?

(Refer to the MSDS)

- Cool well-ventilated area away from all sources of ignition
- Keep away from strong oxidising agents, acids and organic peroxides
- Do not transfer to unlabelled containers.

19. What is the correct disposal method for the product?

- Refer to local land waste management authority.

20. Name of person/s conducting risk assessment?

21. Date of risk assessment?

22. Review Date?

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Business Name: _____

Hazardous Substance Risk Assessments

The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.



<p>Related Risk Assessments:</p>	<p>Epoxy Resin Part B</p>	
<p>1. How is the substance used? – i.e. describe the task?</p> <p><i>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</i></p>	<ul style="list-style-type: none"> ■ Mixed with Epoxy Resin Part B and then sprayed or brushed onto finished surfaces. 	
<p>2. How are people exposed to the substance?</p> <p><i>(Tick or mark applicable routes of entry)</i></p>	<p>Skin (splashed onto or absorbed through)</p>	<p>✓</p>
	<p>Eyes (splashed onto or absorbed through)</p>	<p>✓</p>
	<p>Inhalation (breathed in)</p>	<p>✓</p>
	<p>Ingestion (swallowed)</p>	<p>✓</p>
<p>3. How much of the substance are workers exposed to during the task?</p> <p><i>(e.g. in litres/millilitres, kilograms/grams)</i></p>		
<p>4. For how long are workers exposed to the substance?</p> <p><i>(How often is the chemical used. e.g. in hours per day and days per week)</i></p>		
<p>5. Briefly, what are the health effects of exposure to this substance?</p> <p><i>(Refer to the MSDS)</i></p>	<p>Skin:</p>	<p>May cause irritation, drying and cracking</p>
	<p>Eyes:</p>	<p>Mild to moderate irritation on entering eye, if in eye for sometime product could swell and redden the eye</p>
	<p>Inhalation:</p>	<p>Harmful if inhaled. Inhalation over long periods may cause nervous system impairment</p>
	<p>Ingestion:</p>	<p>Harmful if ingested</p>
<p>6. What engineering control measures (e.g. extraction, ventilation, dilution ventilation) are recommended?</p> <p><i>(Refer to the MSDS)</i></p>	<ul style="list-style-type: none"> ■ Use in well-ventilated area ■ Local ventilation is usually required to remove solvent fumes from areas ■ Maintain vapour air levels below exposure limits. 	

7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended?

(Refer to the MSDS)



On combustion, product may emit toxic fumes of Carbon Monoxide (CO).

- Fire fighting equipment supplied and serviced; spill kit and first aid available
- Training provided in the correct handling, storage, waste, spill and disposal procedures. Including operation of equipment involving the use of Epoxy Resin part A
- The environment surrounding applications must be free of all sources of ignition
- Keep containers closed when not in use
- Decanted materials to be labelled as per the original product.

8. Currently, what engineering controls are used to control exposure to the substance?

9. If engineering controls are used, are they maintained and checked for effectiveness?

(Give Details)

- Training to be provided in the correct method of auditing and maintaining safety systems
- Use of checklist for weekly/monthly Inspections.

10. What Personal Protective Equipment (PPE) is recommended?

(Refer to the MSDS)



Skin: Coveralls, Chemical goggles, impervious gloves, Safety boots



Eyes: Goggles or Face Shield



Inhalation: Canister Mask

11. Currently, what PPE is used?

(Give Details)

Skin:

Eyes:

Inhalation:

Ingestion:

12. Are any other control measures currently used at the workplace?

13. What is the level of risk from use of this hazardous substance?

TWA

STEL

Level of risk:

Explanation of why this risk level is chosen:

		Consequence			
		1 Unknown	2 Minor	3 Moderate	4 Major
Likelihood	A Likely	R	M	H	H
	B Possible	R	L	M	H
	C Unlikely	R	L	L	M
	D Unknown	R	L	M	H

H – High Risk. Use may be tolerable in some instances, but requires immediate controls.

M – Moderate Risk. Job should be okay to proceed after consideration of further risk reduction options.

L – Low Risk. Job okay to proceed in most circumstances.

R – Review Risk. Undertake further review before use.

14. Does air monitoring need to be done?

You can have air monitoring done to:

- find out how much your employees are being exposed to
- find out if the controls being used are adequate to ensure employee's health and safety is protected.

15. What control measures will be implemented?

Hierarchy of Control Measures

(MOST EFFECTIVE) **Elimination**

Substitution (with a less hazardous substance)

Engineer out the hazard by isolation

Engineer out the hazard by ventilation

Administrative controls (rotation, procedures etc)

(LEAST EFFECTIVE) **PPE**

Give Details (if any)

- A system in place to manage the storage & handling of Epoxy Resin Part A. The system to include:
 - Training for employees on the safe handling and use of the product
 - Supervision to make sure these controls are being correctly used
- Equipment to be regularly checked and maintained
- Monitor exposure to ensure it is within STEL and TWA limits
- Gloves to be worn (impervious)
- Goggles, overalls (or long sleeve shirt & trousers) to be worn.

16. Is health surveillance required?

Health surveillance is required if:

- If TWA and SteL limits are exceeded
- Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or
- The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following:

4,4' Methylenebis (2-chloroaniline) (MOCA)
Acrylonitrile
Asbestos
Benzene
Crystalline silica
Inorganic arsenic
Inorganic chromium

Inorganic mercury
Isocyanates
Organophosphate pesticides
Pentachlorophenol (PCP)
Polycyclic aromatic hydrocarbons (PAH)
Thallium
Vinyl chloride

17. How are spills and waste to be managed?

(Refer to the MSDS)

- Use absorbent material (kitty litter, sand, vermiculite)
- Scrape up and deposit in suitable containers & label appropriately
- Prevent contamination of waterways.

18. How is the product to be stored?

(Refer to the MSDS)

- Cool well-ventilated area
- Keep away from strong oxidising agents
- Do not transfer to unlabelled containers.

19. What is the correct disposal method for the product?

- Refer to local land waste management authority.

20. Name of person/s conducting risk assessment?

21. Date of risk assessment?

22. Review Date?

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Business Name: _____

Hazardous Substance Risk Assessments

The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.



Related Risk Assessments:	Epoxy Resin Part A	
1. How is the substance used? – i.e. describe the task? <i>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</i>	<ul style="list-style-type: none"> ■ Mixed with Epoxy Resin Part A as a hardener. 	
2. How are people exposed to the substance? <i>(Tick or mark applicable routes of entry)</i>	Skin (splashed onto or absorbed through) Eyes (splashed onto or absorbed through) Inhalation (breathed in) Ingestion (swallowed)	✓ ✓ ✓ ✓
3. How much of the substance are workers exposed to during the task? <i>(e.g: in litres/millilitres, kilograms/grams)</i>		
4. For how long are workers exposed to the substance? <i>(How often is the chemical used. e.g: in hours per day and days per week)</i>		
5. Briefly, what are the health effects of exposure to this substance? <i>(Refer to the MSDS)</i>	Skin: Eyes: Inhalation: Ingestion:	May cause irritation, drying and cracking Mild to moderate irritation on entering eye, if in eye for sometime product could swell and redden the eye Harmful if inhaled. Inhalation over long periods may cause nervous system impairment Harmful if ingested
6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended? <i>(Refer to the MSDS)</i>	<ul style="list-style-type: none"> ■ Use in well-ventilated area ■ Local ventilation is usually required to remove solvent fumes from areas ■ Maintain vapour air levels below exposure limits. 	

7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended?

(Refer to the MSDS)



On combustion, product may emit toxic fumes of Carbon Monoxide (CO).

- Fire fighting equipment supplied and serviced; spill kit and first aid available
- Training provided in the correct handling, storage, waste, spill and disposal procedures. Including operation of equipment involving the use of Epoxy Resin Part B
- The environment surrounding applications must be free of all sources of ignition
- Keep containers closed when not in use
- Decanted materials to be labelled as per the original product.

8. Currently, what engineering controls are used to control exposure to the substance?

9. If engineering controls are used, are they maintained and checked for effectiveness?

(Give Details)

- Training to be provided in the correct method of auditing and maintaining safety systems
- Use of checklist for weekly/monthly Inspections.

10. What Personal Protective Equipment (PPE) is recommended?

(Refer to the MSDS)



Skin: Coveralls, Chemical goggles, impervious gloves, Safety boots



Eyes: Goggles or Face Shield

11. Currently, what PPE is used?

(Give Details)

Skin:

Eyes:

Inhalation:

Ingestion:

12. Are any other control measures currently used at the workplace?

13. What is the level of risk from use of this hazardous substance?

TWA _____ STEL _____

Level of risk:

Explanation of why this risk level is chosen:

		Consequence			
		1 Unknown	2 Minor	3 Moderate	4 Major
Likelihood	A Likely	R	M	H	H
	B Possible	R	L	M	H
	C Unlikely	R	L	L	M
	D Unknown	R	L	M	H

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R – Review Risk. Undertake further review before use.



<p>14. Does air monitoring need to be done?</p> <p>You can have air monitoring done to:</p> <ul style="list-style-type: none"> ■ find out how much your employees are being exposed to ■ find out if the controls being used are adequate to ensure employee's health and safety is protected. 			
<p>15. What control measures will be implemented?</p> <p>Hierarchy of Control Measures</p> <p>(MOST EFFECTIVE) Elimination</p> <p>Substitution (with a less hazardous substance)</p> <p>Engineer out the hazard by isolation</p> <p>Engineer out the hazard by ventilation</p> <p>Administrative controls (rotation, procedures etc)</p> <p>(LEAST EFFECTIVE) PPE</p>	<p>Give Details (if any)</p> <ul style="list-style-type: none"> ■ A system in place to manage the storage & handling of Epoxy Resin Part B. The system to include: <ul style="list-style-type: none"> • Training for employees on the safe handling and use of the product • Supervision to make sure these controls are being correctly used ■ Equipment to be regularly checked and maintained ■ Monitor exposure to ensure it is within STEL and TWA limits ■ Gloves to be worn (impervious) ■ Goggles, overalls (or long sleeve shirt & trousers) to be worn. 		
<p>16. Is health surveillance required?</p> <p>Health surveillance is required if:</p> <ul style="list-style-type: none"> ■ If TWA and SteL limits are exceeded ■ Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or ■ The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following: <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride </td> </tr> </table>	<ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium 	<ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride 	
<ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium 	<ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride 		
<p>17. How are spills and waste to be managed?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Use absorbent material (kitty litter, sand, vermiculite) ■ Scrape up and deposit in suitable containers & label appropriately ■ Prevent contamination of waterways. 		
<p>18. How is the product to be stored?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Cool well-ventilated area ■ Keep away from strong oxidising agents ■ Do not transfer to unlabelled containers. 		
<p>19. What is the correct disposal method for the product?</p>	<ul style="list-style-type: none"> ■ Refer to local land waste management authority. 		
<p>20. Name of person/s conducting risk assessment?</p>			
<p>21. Date of risk assessment?</p>			
<p>22. Review Date?</p>			

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Business Name: _____

Hazardous Substance Risk Assessments

The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.



Related Risk Assessments:

1. How is the substance used?
– i.e. describe the task?

(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).

- Mixed with Epoxy Resin Part A as a hardener.

2. How are people exposed to the substance?

(Tick or mark applicable routes of entry)

Skin (splashed onto or absorbed through)	✓
Eyes (splashed onto or absorbed through)	✓
Inhalation (breathed in)	✓
Ingestion (swallowed)	✓

3. How much of the substance are workers exposed to during the task?

(e.g: in litres/millilitres, kilograms/grams)

4. For how long are workers exposed to the substance?

(How often is the chemical used. e.g: in hours per day and days per week)

5. Briefly, what are the health effects of exposure to this substance?

(Refer to the MSDS)








Skin:	Causes irritation and corrosive to skin. Skin sensitiser Repeated contact may cause contact dermatitis
Eyes:	Corrosive. Irritation on entering eye
Inhalation:	Irritating to the respiratory system
Ingestion:	Swallowing can cause irritation of the gastro intestinal tract and abdominal pains.

6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended?

(Refer to the MSDS)

- Use in well-ventilated area
- Maintain levels below exposure limits.



<p>7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended? <i>(Refer to the MSDS)</i></p>	 Burning produces toxic fumes, carbon oxides, nitrogen oxides.  ■ Fire fighting equipment supplied and serviced; spill kit and first aid available  ■ Training provided in the correct handling, storage, waste, spill and disposal procedures. Including operation of equipment involving the use of polyamine based hardeners  ■ The environment surrounding applications must be free of all sources of ignition ■ Decanted materials to be labelled as per the original product.
<p>8. Currently, what engineering controls are used to control exposure to the substance?</p>	
<p>9. If engineering controls are used, are they maintained and checked for effectiveness? <i>(Give Details)</i></p>	<ul style="list-style-type: none"> ■ Training to be provided in the correct method of auditing and maintaining safety systems ■ Use of checklist for weekly/monthly Inspections.
<p>10. What Personal Protective Equipment (PPE) is recommended? <i>(Refer to the MSDS)</i></p>	 Skin: Coveralls, chemical goggles, impervious gloves, Safety boots  Eyes: Goggles or Face Shield  Inhalation: Filter type mask [organic vapours, particles].
<p>11. Currently, what PPE is used? <i>(Give Details)</i></p>	Skin: Eyes: Inhalation: Ingestion:
<p>12. Are any other control measures currently used at the workplace?</p>	

<p>13. What is the level of risk from use of this hazardous substance?</p>	TWA STEL Level of risk: Explanation of why this risk level is chosen:
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		Consequence			
		1 Unknown	2 Minor	3 Moderate	4 Major
Likelihood	A Likely	R	M	H	H
	B Possible	R	L	M	H
	C Unlikely	R	L	L	M
	D Unknown	R	L	M	H

H – High Risk. Use may be tolerable in some instances, but requires immediate controls.
 M – Moderate Risk. Job should be okay to proceed after consideration of further risk reduction options.
 L – Low Risk. Job okay to proceed in most circumstances.
 R – Review Risk. Undertake further review before use.



<p>14. Does air monitoring need to be done?</p> <p>You can have air monitoring done to:</p> <ul style="list-style-type: none"> ■ find out how much your employees are being exposed to ■ find out if the controls being used are adequate to ensure employee's health and safety is protected. 	<ul style="list-style-type: none"> ■ Regular air monitoring to be conducted. 		
<p>15. What control measures will be implemented?</p> <p>Hierarchy of Control Measures</p> <p>(MOST EFFECTIVE) Elimination</p> <p>Substitution (with a less hazardous substance)</p> <p>Engineer out the hazard by isolation</p> <p>Engineer out the hazard by ventilation</p> <p>Administrative controls (rotation, procedures etc)</p> <p>(LEAST EFFECTIVE) PPE</p>	<p>Give Details (if any)</p> <ul style="list-style-type: none"> ■ A system in place to manage the storage & handling of polyamine based hardeners. The system to include: <ul style="list-style-type: none"> • Training for employees on the safe handling and use of the product • Supervision to make sure these controls are being correctly used ■ Equipment to be regularly checked and maintained ■ Monitor exposure to ensure it is within STEL and TWA limits ■ Gloves to be worn (impervious) ■ Goggles, overalls (or long sleeve shirt & trousers) to be worn. 		
<p>16. Is health surveillance required?</p> <p>Health surveillance is required if:</p> <ul style="list-style-type: none"> ■ If TWA and Stel limits are exceeded ■ Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or ■ The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following: <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride </td> </tr> </table>	<ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium 	<ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride 	
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<p>17. How are spills and waste to be managed?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Use absorbent material (kitty litter, sand, vermiculite) ■ Scrape up and deposit in suitable containers ■ Prevent contamination of waterways. 		
<p>18. How is the product to be stored?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Cool well-ventilated area and away from flammables and strong oxidising agents ■ Keep in original container ■ Plastics unsuitable as storage and handling materials. 		
<p>19. What is the correct disposal method for the product?</p>	<ul style="list-style-type: none"> ■ Refer to local land waste management authority. 		
<p>20. Name of person/s conducting risk assessment?</p>			
<p>21. Date of risk assessment?</p>			
<p>22. Review Date?</p>			

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Business Name: _____

Hazardous Substance Risk Assessments


The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.



Related Risk Assessments:

<p>1. How is the substance used? – i.e. describe the task? <i>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</i></p>	<ul style="list-style-type: none"> ■ Mixed with hardener and then sprayed or brushed onto various surfaces. 	
<p>2. How are people exposed to the substance? <i>(Tick or mark applicable routes of entry)</i></p>	<p>Skin (splashed onto or absorbed through)</p>	✓
	<p>Eyes (splashed onto or absorbed through)</p>	✓
	<p>Inhalation (breathed in)</p>	✓
	<p>Ingestion (swallowed)</p>	✓
<p>3. How much of the substance are workers exposed to during the task? <i>(e.g: in litres/millilitres, kilograms/grams)</i></p>		
<p>4. For how long are workers exposed to the substance? <i>(How often is the chemical used. e.g: in hours per day and days per week)</i></p>		
<p>5. Briefly, what are the health effects of exposure to this substance? <i>(Refer to the MSDS)</i></p>	<p>Skin:</p>	<p>May cause irritation, drying and cracking as well as contact dermatitis</p>
	<p>Eyes:</p>	<p>May be eye irritant</p>
	<p>Inhalation:</p>	<p>May be an irritant to mucous membranes of respiratory tract. Vapours can result in headaches. High concentrations can affect central nervous system (CNS)</p>
	<p>Ingestion:</p>	<p>Can result in nausea and CNS depression. Repeated or prolonged contact may cause skin sensitisation</p>
<p>6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended? <i>(Refer to the MSDS)</i></p>	<ul style="list-style-type: none"> ■ Use in well-ventilated area ■ Local ventilation is usually required to remove solvent fumes from areas ■ Maintain vapour air levels below exposure limits. 	



<p>7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended? <i>(Refer to the MSDS)</i></p>	 <ul style="list-style-type: none"> ■ Fire fighting equipment supplied and serviced; spill kit and first aid available ■ Training provided in the correct handling, storage, waste, spill and disposal procedures. Including operation of equipment involving the use polyurethane resins ■ The environment surrounding applications must be free of all sources of ignition ■ Keep containers closed when not in use ■ Decanted materials to be labelled as per the original product. 									
<p>8. Currently, what engineering controls are used to control exposure to the substance?</p>										
<p>9. If engineering controls are used, are they maintained and checked for effectiveness? <i>(Give Details)</i></p>	<ul style="list-style-type: none"> ■ Training to be provided in the correct method of auditing and maintaining safety systems ■ Use of checklist for weekly/monthly Inspections. 									
<p>10. What Personal Protective Equipment (PPE) is recommended? <i>(Refer to the MSDS)</i></p>	<table border="0"> <tr> <td data-bbox="571 943 663 1032"></td> <td data-bbox="778 972 826 999">Skin:</td> <td data-bbox="906 972 1214 1003">Coveralls, impervious gloves</td> </tr> <tr> <td data-bbox="571 1055 663 1144"></td> <td data-bbox="778 1084 826 1111">Eyes:</td> <td data-bbox="906 1084 1161 1115">Goggles or Face Shield</td> </tr> <tr> <td data-bbox="571 1167 663 1256"></td> <td data-bbox="778 1196 890 1223">Inhalation:</td> <td data-bbox="938 1196 995 1227">Air Mask</td> </tr> </table>		Skin:	Coveralls, impervious gloves		Eyes:	Goggles or Face Shield		Inhalation:	Air Mask
	Skin:	Coveralls, impervious gloves								
	Eyes:	Goggles or Face Shield								
	Inhalation:	Air Mask								
<p>11. Currently, what PPE is used? <i>(Give Details)</i></p>	<p>Skin:</p> <p>Eyes:</p> <p>Inhalation:</p> <p>Ingestion:</p>									
<p>12. Are any other control measures currently used at the workplace?</p>										

<p>13. What is the level of risk from use of this hazardous substance?</p>	<p>TWA</p> <p>STEL</p> <p>Level of risk:</p> <p>Explanation of why this risk level is chosen:</p>
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		Consequence			
		1 Unknown	2 Minor	3 Moderate	4 Major
Likelihood	A Likely	R	M	H	H
	B Possible	R	L	M	H
	C Unlikely	R	L	L	M
	D Unknown	R	L	M	H

H – High Risk. Use may be tolerable in some instances, but requires immediate controls.
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14. Does air monitoring need to be done?

You can have air monitoring done to:

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- find out if the controls being used are adequate to ensure employee's health and safety is protected.

15. What control measures will be implemented?

Hierarchy of Control Measures

(MOST EFFECTIVE) **Elimination**

Substitution (with a less hazardous substance)

Engineer out the hazard by isolation

Engineer out the hazard by ventilation

Administrative controls (rotation, procedures etc)

(LEAST EFFECTIVE) **PPE**

Give Details (if any)

- A system in place to manage the storage & handling of polyurethane resins. The system to include:
 - Training for employees on the safe handling and use of the product
 - Supervision to make sure these controls are being correctly used
- Equipment to be regularly checked and maintained
- Monitor exposure to ensure it is within STEL and TWA limits
- Gloves to be worn (impervious)
- Goggles, overalls (or long sleeve shirt & trousers) to be worn.

16. Is health surveillance required?

Health surveillance is required if:

- If TWA and SteL limits are exceeded
- Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or
- The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following:

4,4' Methylenebis (2-chloroaniline) (MOCA)
Acrylonitrile
Asbestos
Benzene
Crystalline silica
Inorganic arsenic
Inorganic chromium

Inorganic mercury
Isocyanates
Organophosphate pesticides
Pentachlorophenol (PCP)
Polycyclic aromatic hydrocarbons (PAH)
Thallium
Vinyl chloride

17. How are spills and waste to be managed?

(Refer to the MSDS)

- Use absorbent material (kitty litter, sand, vermiculite)
- Scrape up and deposit in suitable containers & label appropriately
- Prevent contamination of waterways.

18. How is the product to be stored?

(Refer to the MSDS)

- Cool well-ventilated area and away from strong oxidising agents
- Do not transfer to unlabelled containers.

19. What is the correct disposal method for the product?

- Refer to local land waste management authority.

20. Name of person/s conducting risk assessment?

21. Date of risk assessment?

22. Review Date?

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Whilst all care will be taken in providing advice to you, Composites Australia and its staff will not be liable for any errors or omissions or for any loss or damage suffered by you or any person which arises (directly or indirectly) from your reliance on this advice or for any breach by you of your obligations under the various Acts.



Business Name: _____

Hazardous Substance Risk Assessments

The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.





Related Risk Assessments:

<p>1. How is the substance used? – i.e. describe the task? <i>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</i></p>	<ul style="list-style-type: none"> ■ Mixed with resin and then sprayed or brushed onto surfaces. 	
<p>2. How are people exposed to the substance? <i>(Tick or mark applicable routes of entry)</i></p>	<p>Skin (splashed onto or absorbed through) ✓</p> <p>Eyes (splashed onto or absorbed through) ✓</p> <p>Inhalation (breathed in) ✓</p> <p>Ingestion (swallowed) ✓</p>	
<p>3. How much of the substance are workers exposed to during the task? <i>(e.g: in litres/millilitres, kilograms/grams)</i></p>		
<p>4. For how long are workers exposed to the substance? <i>(How often is the chemical used. e.g: in hours per day and days per week)</i></p>		
<p>5. Briefly, what are the health effects of exposure to this substance? <i>(Refer to the MSDS)</i></p>	<p>Skin: May cause irritation, staining or sensitisation. Skin contact may cause respiratory sensitisation</p> <p>Eyes: May be slight eye irritant</p> <p>Inhalation: May be an irritant to mucous membranes of respiratory tract. High concentrations may cause allergic respiratory reactions</p> <p>Ingestion: Toxicity is low. Repeated or prolonged contact may cause respiratory and dermal sensitisation</p>	
<p>6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended? <i>(Refer to the MSDS)</i></p>	<ul style="list-style-type: none"> ■ Use in well-ventilated area ■ Local ventilation is usually required to remove solvent fumes from areas ■ Maintain vapour air levels below exposure limits. 	



7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended?
(Refer to the MSDS)


- Fire fighting equipment supplied and serviced; spill kit and first aid available
- Training provided in the correct handling, storage, waste, spill and disposal procedures. Including operation of equipment involving the use of the polyurethane curing agents
- The environment surrounding applications must be free of all sources of ignition
- Keep containers closed when not in use
- Decanted materials to be labelled as per the original product.

8. Currently, what engineering controls are used to control exposure to the substance?


9. If engineering controls are used, are they maintained and checked for effectiveness?
(Give Details)

- Training to be provided in the correct method of auditing and maintaining safety systems
- Use of checklist for weekly/monthly Inspections.


10. What Personal Protective Equipment (PPE) is recommended?
(Refer to the MSDS)



Skin: Coveralls, impervious gloves



Eyes: Goggles or Face Shield



Inhalation: Dust Mask

11. Currently, what PPE is used?
(Give Details)

Skin:

Eyes:

Inhalation:

Ingestion:

12. Are any other control measures currently used at the workplace?

13. What is the level of risk from use of this hazardous substance?

TWA STEL

Level of risk:

Explanation of why this risk level is chosen:

		Consequence			
		1 Unknown	2 Minor	3 Moderate	4 Major
Likelihood	A Likely	R	M	H	H
	B Possible	R	L	M	H
	C Unlikely	R	L	L	M
	D Unknown	R	L	M	H

*H – High Risk. Use may be tolerable in some instances, but requires immediate controls.
M – Moderate Risk. Job should be okay to proceed after consideration of further risk reduction options.
L – Low Risk. Job okay to proceed in most circumstances.
R – Review Risk. Undertake further review before use.*

14. Does air monitoring need to be done?

You can have air monitoring done to:

- find out how much your employees are being exposed to
- find out if the controls being used are adequate to ensure employee's health and safety is protected.

15. What control measures will be implemented?

Hierarchy of Control Measures

(MOST EFFECTIVE) **Elimination**

Substitution (with a less hazardous substance)

Engineer out the hazard by isolation

Engineer out the hazard by ventilation

Administrative controls (rotation, procedures etc)

(LEAST EFFECTIVE) **PPE**

Give Details (if any)

- A system in place to manage the storage & handling of polyurethane curing agents. The system to include:
 - Training for employees on the safe handling and use of the product
 - Supervision to make sure these controls are being correctly used
- Equipment to be regularly checked and maintained
- Monitor exposure to ensure it is within STEL and TWA limits
- Gloves to be worn (impervious)
- Goggles, overalls (or long sleeve shirt & trousers) to be worn.

16. Is health surveillance required?

Health surveillance is required if:

- If TWA and SteL limits are exceeded
- Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or
- The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following:

4,4' Methylenebis (2-chloroaniline) (MOCA)
Acrylonitrile
Asbestos
Benzene
Crystalline silica
Inorganic arsenic
Inorganic chromium

Inorganic mercury
Isocyanates
Organophosphate pesticides
Pentachlorophenol (PCP)
Polycyclic aromatic hydrocarbons (PAH)
Thallium
Vinyl chloride

17. How are spills and waste to be managed? (Refer to the MSDS)

- Use absorbent material (kitty litter, sand, vermiculite)
- Prevent contamination of waterways.

18. How is the product to be stored?

(Refer to the MSDS)

- Cool well-ventilated area
- Ensure all sources of ignition are eliminated
- Keep away from strong oxidising agents
- Do not transfer to unlabelled containers.

19. What is the correct disposal method for the product?

- Refer to local land waste management authority.

20. Name of person/s conducting risk assessment?

21. Date of risk assessment?

22. Review Date?

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Business Name: _____

Hazardous Substance Risk Assessments

The Material Safety Data Sheet (MSDS) will be needed to complete the risk assessment.



Related Risk Assessments:

<p>1. How is the substance used? – i.e. describe the task?</p> <p><i>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</i></p>	<ul style="list-style-type: none"> ■ Brushed onto surfaces. 	
<p>2. How are people exposed to the substance?</p> <p><i>(Tick or mark applicable routes of entry)</i></p>	<p>Skin (splashed onto or absorbed through)</p>	✓
	<p>Eyes (splashed onto or absorbed through)</p>	✓
	<p>Inhalation (breathed in)</p>	✓
	<p>Ingestion (swallowed)</p>	✓
<p>3. How much of the substance are workers exposed to during the task?</p> <p><i>(e.g: in litres/millilitres, kilograms/grams)</i></p>		
<p>4. For how long are workers exposed to the substance?</p> <p><i>(How often is the chemical used. e.g: in hours per day and days per week)</i></p>		
<p>5. Briefly, what are the health effects of exposure to this substance?</p> <p><i>(Refer to the MSDS)</i></p>	<p>Skin: Moderately irritating. Prolonged contact with skin may cause drying and cracking</p>	
	<p>Eyes: Moderate irritation on entering eye, if in eye for sometime product could swell and redden the eye</p>	
	<p>Inhalation: Harmful if inhaled. Inhalation of vapours at elevated temperatures should be avoided. High concentrations can induce anaesthetic or narcotic effects</p>	
	<p>Ingestion: Harmful if ingested</p>	
<p>6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended?</p> <p><i>(Refer to the MSDS)</i></p>	<ul style="list-style-type: none"> ■ Use in well-ventilated area ■ Local ventilation is usually required to remove solvent fumes from areas ■ Maintain vapour air levels below exposure limits. 	



<p>7. Are any other control measures (e.g: procedures, rotation of people, using the substance after hours to minimise how many people are exposed) recommended? <i>(Refer to the MSDS)</i></p>	  <ul style="list-style-type: none"> ■ Fire fighting equipment supplied and serviced; spill kit and first aid available ■ Training provided in the correct handling, storage, waste, spill and disposal procedures. Including operation of equipment involving the use of the mould release agents ■ The environment surrounding applications must be free of all sources of ignition ■ Keep containers closed when not in use ■ Decanted materials to be labelled as per the original product. 									
<p>8. Currently, what engineering controls are used to control exposure to the substance?</p>										
<p>9. If engineering controls are used, are they maintained and checked for effectiveness? <i>(Give Details)</i></p>	<ul style="list-style-type: none"> ■ Training to be provided in the correct method of auditing and maintaining safety systems ■ Use of checklist for weekly/monthly Inspections. 									
<p>10. What Personal Protective Equipment (PPE) is recommended? <i>(Refer to the MSDS)</i></p>	<table border="0"> <tr> <td data-bbox="571 947 663 1037"></td> <td data-bbox="778 976 826 999">Skin:</td> <td data-bbox="906 976 1437 1032">Coveralls, Chemical goggles, impervious gloves, Leather boots</td> </tr> <tr> <td data-bbox="571 1059 663 1149"></td> <td data-bbox="778 1088 826 1111">Eyes:</td> <td data-bbox="906 1088 1161 1111">Goggles or Face Shield</td> </tr> <tr> <td data-bbox="571 1171 663 1261"></td> <td data-bbox="778 1200 906 1223">Inhalation:</td> <td data-bbox="906 1200 1241 1223">Low Levels – Organic respirator</td> </tr> </table>		Skin:	Coveralls, Chemical goggles, impervious gloves, Leather boots		Eyes:	Goggles or Face Shield		Inhalation:	Low Levels – Organic respirator
	Skin:	Coveralls, Chemical goggles, impervious gloves, Leather boots								
	Eyes:	Goggles or Face Shield								
	Inhalation:	Low Levels – Organic respirator								
<p>11. Currently, what PPE is used? <i>(Give Details)</i></p>	<p>Skin:</p> <p>Eyes:</p> <p>Inhalation:</p> <p>Ingestion:</p>									
<p>12. Are any other control measures currently used at the workplace?</p>										

<p>13. What is the level of risk from use of this hazardous substance?</p>	<p>TWA</p> <p>STEL</p> <p>Level of risk:</p> <p>Explanation of why this risk level is chosen:</p>
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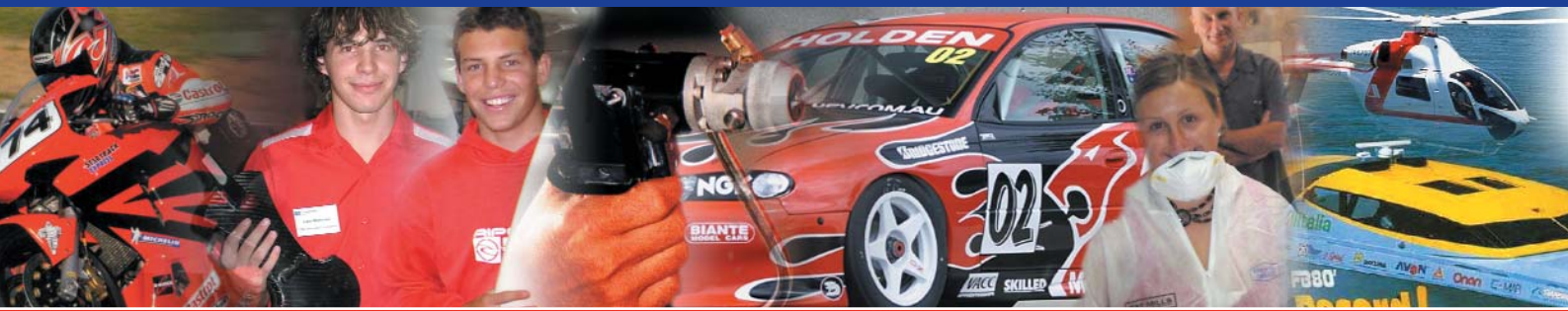
		Consequence			
		1 Unknown	2 Minor	3 Moderate	4 Major
Likelihood	A Likely	R	M	H	H
	B Possible	R	L	M	H
	C Unlikely	R	L	L	M
	D Unknown	R	L	M	H

H – High Risk. Use may be tolerable in some instances, but requires immediate controls.
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L – Low Risk. Job okay to proceed in most circumstances.
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<p>14. Does air monitoring need to be done?</p> <p>You can have air monitoring done to:</p> <ul style="list-style-type: none"> ■ find out how much your employees are being exposed to ■ find out if the controls being used are adequate to ensure employee's health and safety is protected. 			
<p>15. What control measures will be implemented?</p> <p>Hierarchy of Control Measures</p> <p>(MOST EFFECTIVE) Elimination</p> <p>Substitution (with a less hazardous substance)</p> <p>Engineer out the hazard by isolation</p> <p>Engineer out the hazard by ventilation</p> <p>Administrative controls (rotation, procedures etc)</p> <p>(LEAST EFFECTIVE) PPE</p>	<p>Give Details (if any)</p> <ul style="list-style-type: none"> ■ A system in place to manage the storage & handling of mould release agents. The system to include: <ul style="list-style-type: none"> • Training for employees on the safe handling and use of the product • Supervision to make sure these controls are being correctly used ■ Equipment to be regularly checked and maintained ■ Monitor exposure to ensure it is within STEL and TWA limits ■ Gloves to be worn (impervious) ■ Goggles, overalls (or long sleeve shirt & trousers) to be worn. 		
<p>16. Is health surveillance required?</p> <p>Health surveillance is required if:</p> <ul style="list-style-type: none"> ■ If TWA and Stel limits are exceeded ■ Someone has an adverse effect from a hazardous substance at work and there is a way to detect signs of the health effect, or ■ The level of risk (from question 13) is significant and the substance contains (or is) one or more of the following: <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride </td> </tr> </table>	<ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium 	<ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride 	
<ul style="list-style-type: none"> 4,4' Methylenebis (2-chloroaniline) (MOCA) Acrylonitrile Asbestos Benzene Crystalline silica Inorganic arsenic Inorganic chromium 	<ul style="list-style-type: none"> Inorganic mercury Isocyanates Organophosphate pesticides Pentachlorophenol (PCP) Polycyclic aromatic hydrocarbons (PAH) Thallium Vinyl chloride 		
<p>17. How are spills and waste to be managed? (Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Use absorbent material (kitty litter, sand, vermiculite) ■ Prevent contamination of waterways. 		
<p>18. How is the product to be stored?</p> <p>(Refer to the MSDS)</p>	<ul style="list-style-type: none"> ■ Store in a cool and well ventilative area ■ Ensure all sources of ignition are eliminated and keep away from strong oxidising agents ■ Do not transfer to unlabelled containers.. 		
<p>19. What is the correct disposal method for the product?</p>	<ul style="list-style-type: none"> ■ Refer to local land waste management authority. 		
<p>20. Name of person/s conducting risk assessment?</p>			
<p>21. Date of risk assessment?</p>			
<p>22. Review Date?</p>			

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