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
- Dangerous Goods Safety Management Regulation 2001

Australian Standards/New Zealand Standards
- AS/NZS 4360:2004 - Risk management
- AS 1319:1994 - Safety signs for the occupational environment

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

This booklet has been produced through funding by the Queensland Government – Department of Employment and Industrial Relations and in collaboration with Composites Australia.
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.
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.

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.
Risk Assessment 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? | Skin (splashed onto or absorbed through) | ✔ |
| (Tick or mark applicable routes of entry) | 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? | 0.05millilitres per task |
| (e.g: in litres/millilitres, kilograms/grams) | |
### 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**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. For how long are workers exposed to the substance?</td>
<td>6 minutes per day 5 days per week</td>
</tr>
</tbody>
</table>

### 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**

<table>
<thead>
<tr>
<th>Route of Entry</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin:</td>
<td>May cause irritation, drying and cracking.</td>
</tr>
<tr>
<td>Eyes:</td>
<td>Mild to moderate irritation on entering eye, if in eye for sometime product could swell and redden the eye.</td>
</tr>
<tr>
<td>Inhalation:</td>
<td>Harmful if inhaled. Inhalation over long periods may cause nervous system impairment.</td>
</tr>
<tr>
<td>Ingestion:</td>
<td>Harmful if ingested.</td>
</tr>
</tbody>
</table>

### 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**

- 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?

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.

<table>
<thead>
<tr>
<th>Example</th>
</tr>
</thead>
</table>
| **9. If engineering controls are used, are they maintained and checked for effectiveness?** | ■ No maintenance program or schedule in place  
■ No review of effectiveness has been undertaken. |

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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.

<table>
<thead>
<tr>
<th>Example</th>
</tr>
</thead>
</table>
| **10. What Personal Protective Equipment (PPE) is recommended?** | **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.

<table>
<thead>
<tr>
<th>Example</th>
</tr>
</thead>
</table>
| **11. Currently, what PPE is used?** | **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

<table>
<thead>
<tr>
<th>12. Are any other control measures currently used at the workplace?</th>
</tr>
</thead>
<tbody>
<tr>
<td>No other controls are used.</td>
</tr>
</tbody>
</table>

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

TWA STEL

Level of risk: Moderate

The appropriate levels of engineering controls are not in place. In the past 2 years, 2 employees have required medical treatment for injuries received from using the substance.

14. Does air monitoring need to be done?

Air monitoring may be recommended by the MSDS.

You may also carry out air monitoring to:

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

If you choose to do monitoring, you can seek advice and assistance from a workplace health and safety consultant who has skills and qualifications in occupational hygiene.

Monitor air in the factory for 1 month to determine the:

- Exposure levels
- Effectiveness of the extraction fan.
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.

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 – 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? | • Extraction fan to be inspected monthly and a maintenance schedule developed
| Hierarchy of Control Measures | • Employees trained in using the extraction fan
| (MOST EFFECTIVE) | • Supervisor to use checklist to record that controls are being used
| Elimination | • Air monitoring to be carried out bi-annually to ensure exposure is within STEL and TWA limits
| Substitution (with a less hazardous substance) | • Gloves to be worn (impervious)
| Engineer out the hazard by isolation | • 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 effect, 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

- 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 dispense vapours
- Use absorbent material (kitty litter, sand, vermiculite) to clean up any spill 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.
### 19. What is the correct disposal method for the product?

The MSDS may contain information regarding how to dispose of the substance. Local land waste management authorities should also be consulted prior to disposal of any hazardous substance and/or dangerous good. Where practicable, use registered and trained people to properly dispose of hazardous substances and/or dangerous goods.

**Example**

| 19. What is the correct disposal method for the product? | ABC Hazardous Substance Waste removal contractors to be used to remove any waste or out of date product. |

### 20. Name of person/s conducting risk assessment?

Record the name or names of the people who conducted the risk assessment. This is useful for obtaining clarification on any information recorded in the risk assessment.

**Example**

| 20. Name of person/s conducting risk assessment? | Jeff Smith  
Robert James |

### 21. Date of risk assessment?

Recording the date the risk assessment was undertaken helps in document control and in determining the credibility of the information. For example the information contained in a risk assessment completed more than 5 years ago may no longer be valid.

**Example**


### 22. Review Date?

A review date will help to ensure the information contained in the risk assessment is current and accurate.

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.

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.

**Example**

| 22. Review Date? | 30 April, 2008 following results of air monitoring. |

---

- Cool well-ventilated area and away from flammables and strong oxidising agents
- Kept in original container
- Stored on mid shelf with shelf labelled.
Appendix A

Risk Assessment Template
## 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).

2. **How are people exposed to the substance?**
   (Tick or mark applicable routes of entry)

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)

6. **What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended?**
   (Refer to the MSDS)
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)

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

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

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

<table>
<thead>
<tr>
<th>Consequence</th>
<th>1 Unknown</th>
<th>2 Minor</th>
<th>3 Moderate</th>
<th>4 Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Likely</td>
<td>R</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>B Possible</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td>C Unlikely</td>
<td>R</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>D Unknown</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
</tbody>
</table>

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.

TWA
STEL

Level of risk:
Explanation of why this risk level is chosen:
### 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.

(Refer also to MSDS)

### 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)

### 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
- Benene
- Crystalline silica
- Inorganic arsenic
- Inorganic chromium
- Inorganic mercury
- Isocyanates
- Organophosphate pesticides
- Pentachlorophenol (PCP)
- Polycyclic aromatic hydrocarbons (PAH)
- Thallium
- Vinyl chloride

Give Details (if any)

### 17. How are spills and waste managed?

### 18. How is the product to be stored?

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

### 20. Name of person/s conducting risk assessment?

### 21. Date of risk assessment?

### 22. Review Date?

Disclaimer: Any advice given to you as an obligation holder by Composites Australia is given only to assist you to discharge your obligations under the Workplace Health and Safety Act 1995 (Qld). Compliance with this advice does not relieve you of your obligations under various Acts. Any advice is given on the basis that you will make your own independent assessment of what action is necessary to ensure your compliance with the Act. The example risk assessments provided may need to be altered to cater for specific hazardous substances and circumstances in your business. 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.
Hazardous Substance Risk Assessment attachment: List of substances on this Risk Assessment

Risk Assessment Name: (Insert substance name)

is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

List of Contents

<table>
<thead>
<tr>
<th>Substances Name</th>
<th>Brand Name</th>
<th>Date of MSDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(list the name of every substance assessed on the risk assessment)</td>
<td>(list the brand names of the substances)</td>
<td>(list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)</td>
</tr>
</tbody>
</table>

|               |            |              |
|               |            |              |
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|               |            |              |
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|               |            |              |
|               |            |              |
|               |            |              |
|               |            |              |
Appendix B

Chemical Register
# Chemical Register

Chemical Register (includes Hazardous Substances and Dangerous Goods)

For chemicals kept at:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Company/Contact</th>
<th>UN #</th>
<th>Haz Subs</th>
<th>MSDS</th>
<th>R/A</th>
<th>Class</th>
<th>S/Risk</th>
<th>PG</th>
<th>Haz-chem</th>
<th>Poison</th>
<th>Actual</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE.R.354 Liquid Epoxy Resin</td>
<td></td>
<td>3082</td>
<td>Yes</td>
<td>09/05/07</td>
<td>02/08/08</td>
<td>N/A</td>
<td>N/A</td>
<td>III</td>
<td>2X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where:
- UN # – United Nations Number (as listed on the MSDS). If no UN # allocated, insert N/A (not applicable.)
- Haz Sub – Hazardous Substance (Yes or No) according to the MSDS
- MSDS – Material Safety Data Sheet. The date the MSDS was produced/issued (not printed). MSDS is valid for 5 years from this date unless the product is changed by the manufacturer. No R/A is required if the chemical is not classified as “hazardous”
- R/A – risk assessment. The date the R/A is done can be put in this spot. A risk assessment is required for all Hazardous Substances (HS). A R/A is only required for Dangerous Goods (DG) if stored and handled at a designated Dangerous Goods Location (DGL). All R/A need to be reviewed every 5 years or earlier if something changes with the product by the manufacturer or if a the chemical process used at the workplace is changed.
- Class – the Dangerous Goods Class according to the MSDS. A R/A is not required for a Dangerous Good stored and used at a minor storage location. If no Class number is listed, insert N/A
- S/Risk – Sub Risk according to the MSDS – not all Dangerous Goods have a sub risk. If not a Dangerous Good, then there will be no Sub Risk
- PG – Packaging Group for Dangerous Goods according to the MSDS. If not a Dangerous Good then there will be no PG
- Hazchem – the code listed in the MSDS that is used on placards to notify Emergency Services of the types of potential chemical hazards at the workplace
- Poison – Poison Schedule according to the MSDS – not required for the WHS Regulation on Hazardous Substances. However it may be pertinent to the Health Department requirements and can be included.
- Actual – quantity of chemical currently kept at workplace – Actual may be omitted or it may be called Minimum quantity kept. Required only for DG records
- Max – maximum quantity of chemical ever kept at workplace. Required only for DG records.
Risk Assessment Forms
Specific Substances
### Hazardous Substance Risk Assessments

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

### Related Risk Assessments:

<table>
<thead>
<tr>
<th><strong>1. How is the substance used?</strong> – i.e. describe the task?</th>
</tr>
</thead>
<tbody>
<tr>
<td>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</td>
</tr>
<tr>
<td>Sprayed or brushed onto a surface</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>2. How are people exposed to the substance?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(Tick or mark applicable routes of entry)</td>
</tr>
<tr>
<td>Skin (splashed onto or absorbed through)</td>
</tr>
<tr>
<td>Eyes (splashed onto or absorbed through)</td>
</tr>
<tr>
<td>Inhalation (breathed in)</td>
</tr>
<tr>
<td>Ingestion (swallowed)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>3. How much of the substance are workers exposed to during the task?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(e.g: in litres/millilitres, kilograms/grams)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>4. For how long are workers exposed to the substance?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(How often is the chemical used. e.g: in hours per day and days per week)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>5. Briefly, what are the health effects of exposure to this substance?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(Refer to the MSDS)</td>
</tr>
<tr>
<td>Skin: May cause irritation</td>
</tr>
<tr>
<td>Eyes: Mild to moderate irritation on entering eye, if in eye for sometime product could swell and redden the eye</td>
</tr>
<tr>
<td>Inhalation: Harmful if inhaled</td>
</tr>
<tr>
<td>Ingestion: Harmful if ingested</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(Refer to the MSDS)</td>
</tr>
<tr>
<td>Use in well-ventilated area</td>
</tr>
<tr>
<td>Local ventilation is usually required to remove solvent fumes from areas</td>
</tr>
<tr>
<td>Maintain vapour air levels below exposure limits.</td>
</tr>
</tbody>
</table>
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)

- Decomposition products are toxic.
- Heat may cause violent rupture of containers if involved in a fire.
- 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
- Decantered materials to be labelled as per the original product

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

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

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:** 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

11. Currently, what PPE is used?

(Give Details)

- **Skin:**
- **Eyes:**
- **Inhalation:**

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

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

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

<table>
<thead>
<tr>
<th>Consequence</th>
<th>1 Unknown</th>
<th>2 Minor</th>
<th>3 Moderate</th>
<th>4 Major</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong> Likely</td>
<td>R</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td><strong>B</strong> Possible</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td><strong>C</strong> Unlikely</td>
<td>R</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td><strong>D</strong> Unknown</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
</tbody>
</table>

**Explanation of why this risk level is chosen:**

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)
- Engineering out the hazard by isolation
- Engineering 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 polyester resin and gel coats. 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).

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)
  - Trichloroethylene (TCE)
  - 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 well-ventilated area
- Keep away from sources of ignition and 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?

Disclaimer: Any advice given to you as an obligation holder by Composites Australia is given only to assist you to discharge your obligations under the Workplace Health and Safety Act 1995 (Qld). Compliance with this advice does not relieve you of your obligations under various Acts. Any advice is given on the basis that you will make your own independent assessment of what action is necessary to ensure your compliance with the Act. The example risk assessments provided may need to be altered to cater for specific hazardous substances and circumstances in your business. 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.
Hazardous Substance Risk Assessment attachment: List of substances on this Risk Assessment

### Risk Assessment Name: Polyester Resin and Gel Coats

Polyester Resin and Gel Coats is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsaturated polyester resin</td>
<td>18-75%</td>
</tr>
<tr>
<td>Styrene monomer</td>
<td>18-65%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances Name</th>
<th>Brand Name</th>
<th>Date of MSDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(list the name of every substance assessed on the risk assessment)</td>
<td>(list the brand names of the substances)</td>
<td>(list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)</td>
</tr>
</tbody>
</table>


**Business Name:**

**Hazardous Substance Risk Assessments**

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

<table>
<thead>
<tr>
<th>Related Risk Assessments:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. How is the substance used?</strong> — i.e. describe the task?</td>
<td>■ An initiator, which is poured as a liquid in small quantities into unsaturated polyesters.</td>
</tr>
<tr>
<td><strong>2. How are people exposed to the substance?</strong> (Tick or mark applicable routes of entry)</td>
<td></td>
</tr>
<tr>
<td>Skin (splashed onto or absorbed through)</td>
<td>✔</td>
</tr>
<tr>
<td>Eyes (splashed onto or absorbed through)</td>
<td>✔</td>
</tr>
<tr>
<td>Inhalation (breathed in)</td>
<td>✔</td>
</tr>
<tr>
<td>Ingestion (swallowed)</td>
<td>✔</td>
</tr>
<tr>
<td><strong>3. How much of the substance are workers exposed to during the task?</strong> (e.g: in litres/millilitres, kilograms/grams)</td>
<td></td>
</tr>
<tr>
<td><strong>4. For how long are workers exposed to the substance?</strong> (How often is the chemical used. e.g: in hours per day and days per week)</td>
<td></td>
</tr>
<tr>
<td><strong>5. Briefly, what are the health effects of exposure to this substance?</strong> (Refer to the MSDS)</td>
<td></td>
</tr>
<tr>
<td>Skin:</td>
<td>Severe skin irritant</td>
</tr>
<tr>
<td>Eyes:</td>
<td>Contact causes severe corrosion and may cause blindness</td>
</tr>
<tr>
<td>Inhalation:</td>
<td>Moderately toxic and highly irritating to the respiratory tract</td>
</tr>
<tr>
<td>Ingestion:</td>
<td>May cause mucous membrane irritation and vertigo</td>
</tr>
<tr>
<td><strong>6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended?</strong> (Refer to the MSDS)</td>
<td></td>
</tr>
<tr>
<td>■ Use in well-ventilated area</td>
<td></td>
</tr>
<tr>
<td>■ Local ventilation is usually required to remove solvent fumes from areas</td>
<td></td>
</tr>
<tr>
<td>■ Maintain vapour air levels below exposure limits.</td>
<td></td>
</tr>
</tbody>
</table>
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
- Decanterd 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)

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?

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

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:

<table>
<thead>
<tr>
<th>Consequence</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>likelihood</td>
<td>A</td>
<td>Likely</td>
<td>B</td>
<td>Possible</td>
</tr>
<tr>
<td></td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
</tbody>
</table>

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?

<table>
<thead>
<tr>
<th>Hierarchy of Control Measures</th>
<th>MOST EFFECTIVE</th>
<th>LEAST EFFECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elimination</td>
<td></td>
<td>PPE</td>
</tr>
<tr>
<td>Substitution (with a less hazardous substance)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineer out the hazard by isolation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineer out the hazard by ventilation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative controls (rotation, procedures etc)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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)
  - Acrylamide
  - Asbestos
  - Benzene
  - Crystalline silica
  - Inorganic arsenic
  - 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?
Hazardous Substance Risk Assessment attachment: List of substances on this Risk Assessment

Risk Assessment Name: **Use of MEKP**

Polyester Resin and Gel Coats is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl Phthalate</td>
<td>43%</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>34%</td>
</tr>
<tr>
<td>Phlegmatiser</td>
<td>20%</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>2%</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances Name</th>
<th>Brand Name</th>
<th>Date of MSDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(list the name of every substance assessed on the risk assessment)</td>
<td>(list the brand names of the substances)</td>
<td>(list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)</td>
</tr>
</tbody>
</table>
### 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).
   
   - Placed on various surfaces or moulds and wetted through with polyester or epoxy resins to form a hard coating.

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, mainly confined to cutting and sanding
   - Eyes: Mild to moderate irritation on entering eye
   - Inhalation: Not respirable, but dust masks may be beneficial in areas of high dust content
   - Ingestion:

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

   (Refer to the MSDS)
   
   - Maintain dust levels below exposure limits
   - Use in well-ventilated area.
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)
- 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.

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, gloves, safety boots
- Eyes: Goggles
- Inhalation: Disposable air mask

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:

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>1 Unknown</th>
<th>2 Minor</th>
<th>3 Moderate</th>
<th>4 Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Likely</td>
<td>R</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>B - Possible</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td>C - Unlikely</td>
<td>R</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>D - Unknown</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
</tbody>
</table>

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.

Air monitoring to be carried out annually.

### 15. What control measures will be implemented?

**Hierarchy of Control Measures**

<table>
<thead>
<tr>
<th>MOST EFFECTIVE</th>
<th>LEAST EFFECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elimination</td>
<td>PPE</td>
</tr>
<tr>
<td>Substitution</td>
<td></td>
</tr>
<tr>
<td>Engineer out the hazard</td>
<td></td>
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<tr>
<td>by Isolation</td>
<td></td>
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<tr>
<td>Engineer out the hazard</td>
<td></td>
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<tr>
<td>by Ventilation</td>
<td></td>
</tr>
<tr>
<td>Administrative controls</td>
<td></td>
</tr>
<tr>
<td>[rotation, procedures etc]</td>
<td></td>
</tr>
</tbody>
</table>

**Give Details (if any)**

- A system in place to manage the storage & handling of glass and carbon fibre materials. 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 (for it) 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
  - Perchloroethyl (PCP)
  - Polycyclic aromatic hydrocarbons (PAH)
  - Thallium
  - Vinyl chloride

### 17. How are spills and waste to be managed?

**Refer to the MSDS**

- Dampen with water and sweep up or vacuum
- Scrape up and contain in plastic garbage bags & label appropriately
- Prevent contamination of waterways.

### 18. How is the product to be stored?

**Refer to the MSDS**

- Store in a dry place.

### 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?

**Disclaimer:** Any advice given to you as an obligation holder by Composites Australia is given only to assist you to discharge your obligations under the Workplace Health and Safety Act 1995 (Qld). Compliance with this advice does not relieve you of your obligations under various Acts. Any advice is given on the basis that you will make your own independent assessment of what action is necessary to ensure your compliance with the Act. The example risk assessments provided may need to be altered to cater for specific hazardous substances and circumstances in your business.

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.
Hazardous Substance Risk Assessment attachment:
List of substances on this Risk Assessment

Risk Assessment Name: Glass and Carbon Fibre Matting

Polyester Resin and Gel Coats is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chopped Strand Mat</td>
<td>Various Weights</td>
</tr>
<tr>
<td>Woven Rovings</td>
<td></td>
</tr>
<tr>
<td>Flake Glass</td>
<td></td>
</tr>
<tr>
<td>Surface Tissue</td>
<td></td>
</tr>
</tbody>
</table>

List of Contents

<table>
<thead>
<tr>
<th>Substances Name</th>
<th>Brand Name</th>
<th>Date of MSDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(list the name of every substance assessed on the risk assessment)</td>
<td>(list the brand names of the substances)</td>
<td>(list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)</td>
</tr>
</tbody>
</table>


### 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.
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)

Vapour may form explosive mixtures with air.

- 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 Acetone
- The environment surrounding applications must be free of all sources of ignition
- Keep containers closed when not in use
- Decantered materials to be labelled as per the original product.

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

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

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

10. What Personal Protective Equipment (PPE) is recommended by the MSDS and/or label? (Refer to the MSDS)

Skin: impervious gloves, Safety boots

Eyes: Goggles or Face Shield

Inhalation: Respiratory Protection

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

Skin:

Eyes:

Inhalation:

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

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

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

TWA  8hr 500ppm  STEL  15mins 1000ppm

Level of risk:
Explanation of why this risk level is chosen:

<table>
<thead>
<tr>
<th>Consequence</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of risk</td>
<td>Likely</td>
<td>Minor</td>
<td>Moderate</td>
<td>Major</td>
</tr>
<tr>
<td>A</td>
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<td>D</td>
<td>R</td>
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</tbody>
</table>

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 Acetone. 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 one or more of the following:
     - 4,4’ Methylenediisocyanate (MDI)
     - Arecylnitrile
     - Asbestos
     - Crystalline silica
     - Inorganic arsenic
     - Inorganic chromium
     - Inorganic mercury
     - Isocyanates
     - Organophosphate pesticides
     - Pentachlorophenol (PCP)
     - Polycyclic aromatic hydrocarbons (PAH)
     - Trichloroethylene (Trichloroethane)
     - Vinyl chloride

17. How are spills and waste to be managed?
   (Refer to the MSDS)
   - Use water spray to disperse vapours
   - 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 and away from flammables and strong oxidising agents
   - Keep in original container
   - Plastics unsuitable as storage and handling 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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Hazardous Substance Risk Assessment attachment: List of substances on this Risk Assessment

Risk Assessment Name: **Use of Acetone**

Polyester Resin and Gel Coats is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Acetone</td>
<td>99.5%</td>
</tr>
<tr>
<td>Water</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

## List of Contents

<table>
<thead>
<tr>
<th>Substances Name</th>
<th>Brand Name</th>
<th>Date of MSDS</th>
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<tbody>
<tr>
<td>(list the name of every substance assessed on the risk assessment)</td>
<td>(list the brand names of the substances)</td>
<td>(list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)</td>
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</tbody>
</table>
## 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.
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)

- 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.

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

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

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: | 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 |

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

| Skin: |
| Eyes: |
| Inhalation: |
| Ingestion: |

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

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

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

<table>
<thead>
<tr>
<th>Consequence</th>
<th>1 Unknown</th>
<th>2 Minor</th>
<th>3 Moderate</th>
<th>4 Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Likely</td>
<td>R</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>B Possible</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td>C Unlikely</td>
<td>R</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>D Unknown</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
</tbody>
</table>

TWA  STEL

Level of risk:

Explanation of why this risk level is chosen:

- 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 fillers. 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).

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)
  - Acrylamide
  - 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)
- Sweep and shovel solids into container
- Use approved vacuum to clean up residue
- Prevent contamination of waterways.

18. How is the product to be stored?
(Refer to the MSDS)
- Store in a dry place
- 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?
Hazardous Substance Risk Assessment attachment:
List of substances on this Risk Assessment

Risk Assessment Name: **Use of Fillers – (CaCO$_3$, Al$_2$O$_3$)**
Polyester Resin and Gel Coats is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
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<tbody>
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<td></td>
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<tr>
<th>Substances Name</th>
<th>Brand Name</th>
<th>Date of MSDS</th>
</tr>
</thead>
<tbody>
<tr>
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<td>(list the brand names of the substances)</td>
<td>(list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)</td>
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</tbody>
</table>
### 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).
   - ■ Accelerator or promoter in curing unsaturated polyester resins
   - ■ Mixed for spray or hand brushing.

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:** Irritation, dryness and cracking. Contact dermatitis
   - **Eyes:** Mild irritation on eye
   - **Inhalation:** Harmful if inhaled. Inhalation may cause irritation to nose and throat. Can effect central nervous system
   - **Ingestion:** Harmful if ingested. Repeated or prolonged contact may cause 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 vapour 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 Cobalt 6%
- The environment surrounding applications must be free of all sources of ignition
- Keep containers closed when not in use
- Decantered materials to be labelled as per the original product.

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

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

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: Coveralls, impervious gloves, Safety boots.
- Eyes: Goggles or Face Shield
- Inhalation: Canister Mask

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

Skin:

Eyes:

Inhalation:

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

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

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

<table>
<thead>
<tr>
<th>Consequence</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5ppm – 25mgm/M³</td>
<td>10ppm – 50mgm/M³</td>
</tr>
</tbody>
</table>

Level of risk:

Explanation of why this risk level is chosen:

![Risk Level Table]

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 employees' health and safety is protected.

### 15. What control measures will be implemented?

**Hierarchy of Control Measures**

**MOST EFFECTIVE**
1. Elimination
2. Substitution (with a less hazardous substance)
3. Engineer out the hazard by isolation
4. Engineer out the hazard by ventilation

**LEAST EFFECTIVE**

- Administrative controls (rotation, procedures etc)

Give Details (if any)

- A system in place to manage the storage & handling of Cobalt 6%.
- 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).

### 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)
  - Thorium
  - 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, heat and flame
- 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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## Hazardous Substance Risk Assessment attachment:  
List of substances on this Risk Assessment

**Risk Assessment Name:**  
**Use of Cobalt 6%**

Polyester Resin and Gel Coats is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt salt of 2-hexylhexanoic acid</td>
<td>Approx 36%</td>
</tr>
<tr>
<td>Petroleum hydrocarbons or blend 80% paraffin's and naphthenes and 20% aromatics</td>
<td>Approx 64%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances Name</th>
<th>Brand Name</th>
<th>Date of MSDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(list the name of every substance assessed on the risk assessment)</td>
<td>(list the brand names of the substances)</td>
<td>(list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)</td>
</tr>
</tbody>
</table>
**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).
   - Catalytic hardener mixed with unsaturated polyester resins and then sprayed or brushed on to surfaces.

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: Irritation. Can be absorbed readily through skin causing cyanosis, increased pulse, headaches cardiac arrest
   - Eyes: Can cause burns to eye
   - Inhalation: Harmful if inhaled. Vapours can be absorbed into bloodstream, can cause cyanosis, increased pulse, headaches, cardiac arrest
   - Ingestion: Harmful if ingested. Repeated or prolonged contact may cause health and blood irregularities

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
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 DMA
- The environment surrounding applications must be free of all sources of ignition
- Keep containers closed when not in use
- Decantered 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?

(Refer 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, Safety boots
- Eyes: Goggles or Face Shield
- Inhalation: Canister Mask

11. Currently, what PPE is used?

(Skin:)

Eyes:

Inhalation:

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

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

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:

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>1 Unknown</th>
<th>2 Minor</th>
<th>3 Moderate</th>
<th>4 Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Likely</td>
<td>R</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>B Possible</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td>C Unlikely</td>
<td>R</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>D Unknown</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
</tbody>
</table>

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)
  - Radon
  - 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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Hazardous Substance Risk Assessment attachment:  
List of substances on this Risk Assessment

Risk Assessment Name: **Use of DMA (N,N-dimethylanaline)**
Polyester Resin and Gel Coats is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMA (N,N-Dimethylanaline)</td>
<td>99.4%</td>
</tr>
<tr>
<td>N Methyl Aniline</td>
<td>0.5%</td>
</tr>
<tr>
<td>Aniline</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances Name</th>
<th>Brand Name</th>
<th>Date of MSDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(list the name of every substance assessed on the risk assessment)</td>
<td>(list the brand names of the substances)</td>
<td>(list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)</td>
</tr>
</tbody>
</table>
# Hazardous Substance Risk Assessments

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

## Related Risk Assessments:

<table>
<thead>
<tr>
<th>Related Risk Assessments</th>
<th>Epoxy Resin Part B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How is the substance used? – i.e. describe the task?</td>
<td>Mixed with Epoxy Resin Part B and then sprayed or brushed onto finished surfaces.</td>
</tr>
<tr>
<td>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</td>
<td></td>
</tr>
<tr>
<td>2. How are people exposed to the substance?</td>
<td>Skin (splashed onto or absorbed through)</td>
</tr>
<tr>
<td>(Tick or mark applicable routes of entry)</td>
<td>Eyes (splashed onto or absorbed through)</td>
</tr>
<tr>
<td></td>
<td>Inhalation (breathed in)</td>
</tr>
<tr>
<td></td>
<td>Ingestion (swallowed)</td>
</tr>
<tr>
<td>3. How much of the substance are workers exposed to during the task?</td>
<td>(e.g: in litres/millilitres, kilograms/grams)</td>
</tr>
<tr>
<td>4. For how long are workers exposed to the substance?</td>
<td>(How often is the chemical used. e.g: in hours per day and days per week)</td>
</tr>
<tr>
<td>5. Briefly, what are the health effects of exposure to this substance?</td>
<td>(Refer to the MSDS)</td>
</tr>
<tr>
<td>(Refer to the MSDS)</td>
<td>Skin: May cause irritation, drying and cracking</td>
</tr>
<tr>
<td></td>
<td>Eyes: Mild to moderate irritation on entering eye, if in eye for sometime product could swell and redden the eye</td>
</tr>
<tr>
<td></td>
<td>Inhalation: Harmful if inhaled. Inhalation over long periods may cause nervous system impairment</td>
</tr>
<tr>
<td></td>
<td>Ingestion: Harmful if ingested</td>
</tr>
<tr>
<td>6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended? (Refer to the MSDS)</td>
<td>Use in well-ventilated area</td>
</tr>
<tr>
<td></td>
<td>Local ventilation is usually required to remove solvent fumes from areas</td>
</tr>
<tr>
<td></td>
<td>Maintain vapour air levels below exposure limits.</td>
</tr>
</tbody>
</table>
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)

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

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

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

<table>
<thead>
<tr>
<th>Consequence</th>
<th>1 Unknown</th>
<th>2 Minor</th>
<th>3 Moderate</th>
<th>4 Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Likely</td>
<td>R</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>B Possible</td>
<td>R</td>
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<td>M</td>
<td>H</td>
</tr>
<tr>
<td>C Unlikely</td>
<td>R</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>D Unknown</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
</tbody>
</table>

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

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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Hazardous Substance Risk Assessment attachment:
List of substances on this Risk Assessment

Risk Assessment Name: **Application of Epoxy Resin Part A**
Polyester Resin and Gel Coats is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol-A based epoxy resin</td>
<td>10 - 60%</td>
</tr>
<tr>
<td>Bisphenol-F based epoxy resin</td>
<td>10 - 50%</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>&lt;40%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances Name</th>
<th>Brand Name</th>
<th>Date of MSDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(list the name of every substance assessed on the risk assessment)</td>
<td>(list the brand names of the substances)</td>
<td>(list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)</td>
</tr>
</tbody>
</table>
### Business Name:

### Hazardous Substance Risk Assessments

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

#### Related Risk Assessments:

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxy Resin Part A</td>
<td>Mixed with Epoxy Resin Part A as a hardener.</td>
</tr>
</tbody>
</table>

#### 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)

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

#### 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)

- 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

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

(Refer to the MSDS)

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

(Refer to the MSDS)
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)

- Training to be 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
- Decantered materials to be labelled as per the original product.

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

- 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

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: Goggles or Face Shield
- Inhalation: 
- Ingestion: 

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

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

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

<table>
<thead>
<tr>
<th>Level</th>
<th>Likelihood</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Likely</td>
</tr>
<tr>
<td>B</td>
<td>Possible</td>
</tr>
<tr>
<td>C</td>
<td>Unlikely</td>
</tr>
<tr>
<td>D</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consequence</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>R</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>B</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td>C</td>
<td>R</td>
<td>L</td>
<td>L</td>
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</tr>
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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.
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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 B. 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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Hazardous Substance Risk Assessment attachment:
List of substances on this Risk Assessment

**Risk Assessment Name:** Application of Epoxy Resin Part B

Polyester Resin and Gel Coats is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyamide Resin</td>
<td>&gt;60%</td>
</tr>
<tr>
<td>Tris-dimethylaminomethylphenol</td>
<td>&lt;3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances Name</th>
<th>Brand Name</th>
<th>Date of MSDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(list the name of every substance assessed on the risk assessment)</td>
<td>(list the brand names of the substances)</td>
<td>(list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)</td>
</tr>
</tbody>
</table>
## Polyamine Based Hardeners

### Hazardous Substance Risk Assessments

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

<table>
<thead>
<tr>
<th>Related Risk Assessments:</th>
</tr>
</thead>
</table>

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.
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)

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.

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

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

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: Coveralls, chemical goggles, impervious gloves, Safety boots

Eyes: Goggles or Face Shield

Inhalation: Filter type mask [organic vapours, particles].

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

Skins:

Eyes:

Inhalation:

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

Training to be provided in the correct method of auditing and maintaining safety systems

Use of checklist for weekly/monthly Inspections.

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

<table>
<thead>
<tr>
<th>Consequence</th>
<th>1 (Unknown)</th>
<th>2 (Minor)</th>
<th>3 (Moderate)</th>
<th>4 (Major)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Likely</td>
<td>R</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>B Possible</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td>C Unlikely</td>
<td>R</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>D Unknown</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
</tbody>
</table>

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.

Level of risk:

Explanation of why this risk level is chosen:
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**

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)
     - Radium
     - 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
   - Prevent contamination of waterways.

18. How is the product to be stored?
   (Refer to the MSDS)
   - Cool well-ventilated area and away from flammables and strong oxidising agents
   - Keep in original container
   - Plastics unsuitable as storage and handling 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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Hazardous Substance Risk Assessment attachment: List of substances on this Risk Assessment

Risk Assessment Name: Use of Polyamine Based Hardeners

Polyester Resin and Gel Coats is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl-methylenebis [cyclohexylamine]</td>
<td>(\geq 50% \leq)</td>
</tr>
<tr>
<td>Isophorone diamine</td>
<td>(\geq 30% \leq 42%)</td>
</tr>
<tr>
<td>Tris [dimethylaminomethyl]</td>
<td>(\geq 1% \leq 7%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances Name</th>
<th>Brand Name</th>
<th>Date of MSDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(list the name of every substance assessed on the risk assessment)</td>
<td>(list the brand names of the substances)</td>
<td>(list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)</td>
</tr>
</tbody>
</table>
### Polyurethane Resins

**Hazardous Substance Risk Assessments**

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

#### Related Risk Assessments:

<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>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).</td>
<td>Mixed with hardener and then sprayed or brushed onto various surfaces.</td>
</tr>
<tr>
<td>2. How are people exposed to the substance? (Tick or mark applicable routes of entry)</td>
<td>Skin (splashed onto or absorbed through)</td>
</tr>
<tr>
<td></td>
<td>Eyes (splashed onto or absorbed through)</td>
</tr>
<tr>
<td></td>
<td>Inhalation (breathed in)</td>
</tr>
<tr>
<td></td>
<td>Ingestion (swallowed)</td>
</tr>
<tr>
<td>3. How much of the substance are workers exposed to during the task? (e.g: in litres/millilitres, kilograms/grams)</td>
<td></td>
</tr>
<tr>
<td>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)</td>
<td></td>
</tr>
<tr>
<td>5. Briefly, what are the health effects of exposure to this substance? (Refer to the MSDS)</td>
<td>Skin: May cause irritation, drying and cracking as well as contact dermatitis</td>
</tr>
<tr>
<td></td>
<td>Eyes: May be eye irritant</td>
</tr>
<tr>
<td></td>
<td>Inhalation: May be an irritant to mucous membranes of respiratory tract. Vapours can result in headaches. High concentrations can affect central nervous system (CNS)</td>
</tr>
<tr>
<td></td>
<td>Ingestion: Can result in nausea and CNS depression. Repeated or prolonged contact may cause skin sensitisation</td>
</tr>
<tr>
<td>6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended? (Refer to the MSDS)</td>
<td>Use in well-ventilated area</td>
</tr>
<tr>
<td></td>
<td>Local ventilation is usually required to remove solvent fumes from areas</td>
</tr>
<tr>
<td></td>
<td>Maintain vapour air levels below exposure limits.</td>
</tr>
</tbody>
</table>
7. Are any other control measures (e.g.: procedures, rotation of people, using the substance after hours to minimize 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 polyurethane resins
- The environment surrounding applications must be free of all sources of ignition
- Keep containers closed when not in use
- Decantered materials to be labelled as per the original product.

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

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

9. If engineering controls are used, are they maintained and checked for effectiveness?
(Refer to the MSDS)

- Skin: Coveralls, impervious gloves
- Eyes: Goggles or Face Shield
- Inhalation: Air Mask

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

- Skin: Coveralls, impervious gloves
- Eyes: Goggles or Face Shield
- Inhalation: Air Mask

11. Currently, what PPE is used?
(Refer to the MSDS)

- Skin: 
- Eyes: 
- Inhalation: 
- Ingestion: 

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

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

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

<table>
<thead>
<tr>
<th>Consequence</th>
<th>1 Unknown</th>
<th>2 Minor</th>
<th>3 Moderate</th>
<th>4 Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Likely</td>
<td>R</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>B Possible</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td>C Unlikely</td>
<td>R</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>D Unknown</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
</tbody>
</table>

TWA: [TWA]
 STEL: [STEL]

Level of risk:
Explanation of why this risk level is chosen:

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 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)
  - Radium
  - 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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Hazardous Substance Risk Assessment attachment:  
List of substances on this Risk Assessment

Risk Assessment Name: Application of Polyurethane Resin

Polyester Resin and Gel Coats is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monobutyl ether acetate</td>
<td>1-10%</td>
</tr>
<tr>
<td>Xylene</td>
<td>10-30%</td>
</tr>
<tr>
<td>Synthetic polymers</td>
<td>10-30%</td>
</tr>
<tr>
<td>Pigments</td>
<td>30-60%</td>
</tr>
</tbody>
</table>

**List of Contents**

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monobutyl ether acetate</td>
<td>1-10%</td>
</tr>
<tr>
<td>Xylene</td>
<td>10-30%</td>
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</tr>
<tr>
<td>Pigments</td>
<td>30-60%</td>
</tr>
</tbody>
</table>

**Substances Name**

(list the name of every substance assessed on the risk assessment)

**Brand Name**

(list the brand names of the substances)

**Date of MSDS**

(list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)
## Hazardous Substance Risk Assessments

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

### Related Risk Assessments:

<table>
<thead>
<tr>
<th>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).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed with resin and then sprayed or brushed onto surfaces.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. How are people exposed to the substance? (Tick or mark applicable routes of entry)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin (splashed onto or absorbed through)</td>
</tr>
<tr>
<td>Eyes (splashed onto or absorbed through)</td>
</tr>
<tr>
<td>Inhalation (breathed in)</td>
</tr>
<tr>
<td>Ingestion (swallowed)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. How much of the substance are workers exposed to during the task? (e.g: in litres/millilitres, kilograms/grams)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use in well-ventilated area</td>
</tr>
<tr>
<td>Local ventilation is usually required to remove solvent fumes from areas</td>
</tr>
<tr>
<td>Maintain vapour air levels below exposure limits.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>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)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin: May cause irritation, staining or sensitisation. Skin contact may cause respiratory sensitisation</td>
</tr>
<tr>
<td>Eyes: May be slight eye irritant</td>
</tr>
<tr>
<td>Inhalation: May be an irritant to mucous membranes of respiratory tract. High concentrations may cause allergic respiratory reactions</td>
</tr>
<tr>
<td>Ingestion: Toxicity is low. Repeated or prolonged contact may cause respiratory and dermal sensitisation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Briefly, what are the health effects of exposure to this substance? (Refer to the MSDS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use in well-ventilated area</td>
</tr>
<tr>
<td>Local ventilation is usually required to remove solvent fumes from areas</td>
</tr>
<tr>
<td>Maintain vapour air levels below exposure limits.</td>
</tr>
</tbody>
</table>
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
- Decantered materials to be labelled as per the original product.

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

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

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

(Give Details)

- Skin: Coveralls, impervious gloves
- Eyes: Goggles or Face Shield
- Inhalation: Dust Mask

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

(Refer to the MSDS)

11. Currently, what PPE is used?

(Give Details)

- Skin:
- Eyes:
- Inhalation:
- Ingestion:

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

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

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

<table>
<thead>
<tr>
<th>Consequence</th>
<th>1 Unknown</th>
<th>2 Minor</th>
<th>3 Moderate</th>
<th>4 Major</th>
</tr>
</thead>
<tbody>
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<td>B Possible</td>
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<td>R</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>D Unknown</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
</tbody>
</table>

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
     - Organophosphates
     - Polycyclic aromatic hydrocarbons (PAH)
     - Polyacrilic acid
     - Polychlorinated biphenyls (PCB)
     - Polychlorinated dibenzodioxins (PCDD)
     - Polychlorinated dibenzofurans (PCDF)
     - Polychlorinated naphthalenes (PCN)
     - Polyvinyl chloride (PVC)

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?
Hazardous Substance Risk Assessment attachment: List of substances on this Risk Assessment

Risk Assessment Name: Application of Polyurethane Curing Agents

Polyester Resin and Gel Coats is manufactured from various ingredients. Care should be taken to read the current MSDS for all aspects in the safe handling of the product. Generally the product contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monobutyl ether acetate</td>
<td>1-10%</td>
</tr>
<tr>
<td>Xylene</td>
<td>10-30%</td>
</tr>
<tr>
<td>Synthetic polymers</td>
<td>10-30%</td>
</tr>
<tr>
<td>Pigments</td>
<td>30-60%</td>
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</table>

Substances Name | Brand Name | Date of MSDS |
(list the name of every substance assessed on the risk assessment) | (list the brand names of the substances) | (list the date of the Material Safety Data Sheet (MSDS) to track current versions or are more than 5 years old)
## Hazardous Substance Risk Assessments

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

### Related Risk Assessments:

<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How is the substance used?</td>
<td>Brushed onto surfaces.</td>
</tr>
<tr>
<td>– i.e. describe the task?</td>
<td>(If the chemical is used for a number of different tasks a risk assessment may be needed for each task).</td>
</tr>
<tr>
<td>2. How are people exposed to the substance?</td>
<td>Skin (splashed onto or absorbed through)</td>
</tr>
<tr>
<td>(Tick or mark applicable routes of entry)</td>
<td>Eyes (splashed onto or absorbed through)</td>
</tr>
<tr>
<td></td>
<td>Inhalation (breathed in)</td>
</tr>
<tr>
<td></td>
<td>Ingestion (swallowed)</td>
</tr>
<tr>
<td>3. How much of the substance are workers exposed to during the task?</td>
<td>Use in well-ventilated area</td>
</tr>
<tr>
<td>(e.g: in litres/millilitres, kilograms/grams)</td>
<td>Local ventilation is usually required to remove solvent fumes from areas</td>
</tr>
<tr>
<td></td>
<td>Maintain vapour air levels below exposure limits.</td>
</tr>
<tr>
<td>4. For how long are workers exposed to the substance?</td>
<td>Use in well-ventilated area</td>
</tr>
<tr>
<td>(How often is the chemical used. e.g: in hours per day and days per week)</td>
<td>Local ventilation is usually required to remove solvent fumes from areas</td>
</tr>
<tr>
<td></td>
<td>Maintain vapour air levels below exposure limits.</td>
</tr>
<tr>
<td>5. Briefly, what are the health effects of exposure to this substance?</td>
<td>Use in well-ventilated area</td>
</tr>
<tr>
<td>(Refer to the MSDS)</td>
<td>Local ventilation is usually required to remove solvent fumes from areas</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>6. What engineering control measures (e.g: extraction, ventilation, dilution ventilation) are recommended?</td>
<td>Use in well-ventilated area</td>
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<td>(Refer to the MSDS)</td>
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</table>
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 mould release agents
- The environment surrounding applications must be free of all sources of ignition
- Keep containers closed when not in use
- Decantended materials to be labelled as per the original product.

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

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

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: Coveralls, Chemical goggles, impervious gloves, Leather boots
- Eyes: Goggles or Face Shield
- Inhalation: Low Levels – Organic respirator

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

- Skin:
- Eyes:
- Inhalation:
- Ingestion:

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

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

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

<table>
<thead>
<tr>
<th>Consequence</th>
<th>1 Unknown</th>
<th>2 Minor</th>
<th>3 Moderate</th>
<th>4 Major</th>
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</thead>
<tbody>
<tr>
<td>A - Likely</td>
<td>R</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>B - Possible</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td>C - Unlikely</td>
<td>R</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>D - Unknown</td>
<td>R</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
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</table>

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.

Level of risk:
Explanation of why this risk level is chosen:
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 mould release 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
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  - Inorganic mercury
  - Isocyanates
  - Organophosphate pesticides
  - Pentachlorophenol (PCP)
  - Polynuclear 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)*

- 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...

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?

Disclaimer: Any advice given to you as an obligation holder by Composites Australia is given only to assist you to discharge your obligations under the Workplace Health and Safety Act 1995 (Qld). Compliance with this advice does not relieve you of your obligations under various Acts. Any advice is given on the basis that you will make your own independent assessment of what action is necessary to ensure your compliance with the Act. The example risk assessments provided may need to be altered to cater for specific hazardous substances and circumstances in your business. 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.
Hazardous Substance Risk Assessment attachment:
List of substances on this Risk Assessment

Risk Assessment Name: **Use of Mould Release Agents**
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