

Fibreglass Repairs – Safe Working

Document No.	Work description		
SMS-06-SW-1290	This SWI describes the safe practices for working with Fibreglass and associated chemicals that are used to maintain RollingStock within Maintenance Centres		
	<p>Scope</p> <p>This SWI applies to the hazards and precautions relevant to fibreglass repairs and associated chemicals (solvents, resins, hardeners etc) used by RSD staff in RollingStock maintenance centres</p> <p>This SWI does not cover the hazards or precautions relevant to the work being carried out (i.e. working at heights, manual handling of materials and equipment). Refer to: SMS-06-GD-0240 Working At Heights and SMS-06-GD-0001 Guide to Manual Handling</p>		
Review date	References		
12/01/13	<ul style="list-style-type: none"> • OHS ACT 2000 • NSW OHS Regulation 2001, Part 4.3, Divisions 5 & 7 • NSW OHS Regulation 2001, Chapter 6, Parts 6.1 to 6A.3 Subdivision 7 • Code for Practice for the Safe use of Synthetic Mineral Fibres • SMS-06-GD-0199 Dangerous Goods and Hazardous Substances • SMS-06-GD-0198 Dangerous Goods and Hazardous Substances Risk Assessment • SMS-06-GD-0323 Personal Protective Equipment • SMS-06-PR-0104 Workplace Risk Management. • SMS-06-GD-0240 Working At Heights • SMS-06-GD-0001 Guide to Manual Handling 		
Responsible supervisor	PPE and precautions	Competencies or qualifications	Licences or permits required
Line Manager	<ul style="list-style-type: none"> • Appropriate safety eye protection • 7500 Series Half-Mask Respirator (or better) and appropriate organic filter (whilst mixing) or particulate filter (whilst sanding) • Long sleeved shirt • Gloves suitably resistant to the chemicals being used • Appropriate Safety Footwear • Disposable Overalls and disposable booties when sanding fibreglass • Barrier cream • Additional PPE as required by site risk assessments 	<ul style="list-style-type: none"> • Competent in the use of this SWI • Competent in the use of MSDS • Competent in the inspection and fitting of relevant PPE • Rail Industry Safety Induction (RISI) • Portable mechanical ventilation aids, where required 	
Tools and equipment required			
IF CONTROL MEASURES ARE NOT SUITABLE AND MAJOR CHANGES ARE NEEDED, CONDUCT A RISK ASSESSMENT AND DEVELOP NEW CONTROLS ACCORDING TO SMS-06-PR-0104 WORKPLACE RISK MANAGEMENT .			
	<p>NOTE</p> <p>Pre work brief and task risk assessment</p> <p>Ensure a pre-work brief and task risk assessment is undertaken with all team members involved in the work activity. If any new/additional team members arrive any time later they must be briefed before they commence work.</p>		

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Warning

The following warning applies throughout this SWI

- Some of the chemicals, resins & fibreglass matting present a risk of short term (acute) and/or long term (chronic) illness. Ensure you are familiar with and work in accordance with this SWI as well as any controls identified in the relevant risk assessment. Refer to: [SMS-06-GD-0198 Dangerous Goods and Hazardous Substances Risk Assessment](#) and [SMS-06-GD-0199 Dangerous Goods and Hazardous Substances](#)
- Fibre glass matting or reinforcement contains Synthetic Mineral Fibres (SMF) that are hazardous to health if inhaled. These particulates become airborne especially when in the un-bonded (lose fibres) state. Bonded (solid state) is matting or reinforcement mixed with resin and hardeners forming a solid material moulded to a specific shape; which can be hazardous if sanded hence releasing fibres. Ensure the use of appropriate PPE and refer to the Code of Practice for the Safe use of Synthetic Mineral Fibres
- If you require more information, contact your Line Manager and/or refer to the relevant Material Safety Data Sheet (MSDS)
- Fibre glass fibres can be hazardous to the health of those who come in contact with them. Whenever removing any fibreglass, ensure methods are used that minimise the generation of dust, additionally ensure ventilation is maintained throughout the task and PPE is worn. Large scale removal will require task specific work instructions and the implementation of risk based controls. Information on fibreglass currently being used can be found in the relevant MSDS and site Dangerous Goods / Hazardous Substance risk assessments. Additionally ensure all non essential personnel are clear of the work area and warning signs and barricades are erected
- Never wear contact lenses when working with fibreglass chemicals as they will absorb and concentrate any chemical vapours increasing the risk of injury to the wearer's eye

Site / job planning	<ul style="list-style-type: none"> • Follow all worksite procedures, e.g. Induction, Pre-work brief • Ensure adequate ventilation will be achieved during the work. In most instances this can be achieved through the opening of doors and windows within the relevant carriage. If in doubt, discuss with your Line Manager and determine whether mechanical ventilation (e.g. extraction fan) is to be used • Ensure you are familiar with any additional, specific controls required for all chemicals you plan to use and always refer to MSDS • Where possible, seek less hazardous alternatives to the chemicals you plan to use, and pro-actively exercise and apply the hierarchy of control principles. (If you do not know how to apply or understand the hierarchy of control concept contact your Supervisor, Line Manager or Safety Facilitator) • Ensure you have the necessary PPE to carry out the task. Refer to: SMS-06-GD-0323 Personal Protective Equipment • Ensure any repairs that can be carried out in a dedicated fibreglass room are carried out in the fibreglass room "if available", as this additional control will reduce the risk of injury to the repairer and other personnel
Personal Protective Equipment (PPE)	<p>Many chemicals used in fibreglass repairs can cause irritation, injury or illness if they contact skin or eyes, or if they are inhaled or swallowed. For this reason PPE is required for all fibreglass tasks. Refer to MSDS and SMS-06-GD-0323 Personal Protective Equipment, and Code of Practice for the Safe use of Synthetic Mineral Fibres</p>
Pre-Start Checks	<ul style="list-style-type: none"> • Inspect the PPE, in accordance with SMS-06-GD-0323 Personal Protective Equipment and/or manufacturer's instructions, ensuring it is in good working order. This will provide the necessary protection and therefore will not introduce any additional hazards • Apply barrier cream to the hands and forearms to protect the skin • Verify that any necessary isolation has been achieved, in accordance with the relevant SWI or SMS Lock-out/Tag-out procedure • Verify that the correct chemicals are available, are in clearly labelled containers and are within any expiry date(s). Refer to: SMS-06-GD-0199 Dangerous Goods and Hazardous Substances

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	<p>Warnings</p> <ul style="list-style-type: none"> The use of the wrong chemical or the incorrect use of the right chemical could result in serious injury or illness. Always verify what chemicals you are using and make yourself familiar with the relevant risk assessment and/or MSDS before use, refer to: SMS-06-GD-0199 Dangerous Goods and Hazardous Substances and SMS-06-GD-0198 Dangerous Goods and Hazardous Substances Risk Assessment Ensure that the chemicals being used will not react with water!
Safe Use of Chemicals	<ul style="list-style-type: none"> Always use chemicals in accordance with the manufacturer's instructions, including the MSDS Keep lids of containers secured to minimise release of vapours Ensure adequate ventilation is maintained throughout the duration of the task Do not smoke in or around a work area where flammable chemicals are being used and remove any other forms of ignition Heat is often generated when mixing and during the curing of hardeners/catalysts associated with fibreglass. Ensure there are no sources of ignition or combustible materials in the area. Ensure a suitable or task specific mixing container is used (i.e. will not melt or react with the chemicals) and never use a container that could be mistaken for a drinking vessel such as a cup or glass It is recommended that a dedicated container partially filled with water is nearby so if a mixture overheats it can be safely cooled by placing in the water prior to disposal. Always dispose of all waste chemicals, fibreglass reinforcement and materials used in accordance with the relevant MSDS After using any hardener or resin, to prevent poisoning, always wash your hands, particularly before eating, drinking or smoking
	<p>Warnings</p> <ul style="list-style-type: none"> If you have an adverse reaction to a chemical seek First Aid treatment, refer to the product specific MSDS and seek medical assistance Failure to maintain adequate ventilation could increase the risk of illness, fire or explosion Flammable vapours can accumulate in work areas. Smoking or the use of other sources of ignition could result in fire or explosion and are strictly prohibited Failure to adequately wash your hands after chemical use could result in the transfer of poisons to your mouth or eyes
Fibreglass Reinforcement	<p>Fibreglass dust and fibres generated during sanding can be very irritating to the eyes, lungs and skin. Always wear correct PPE and shower when work with fibreglass is completed.</p>
First Aid	<p>As the First Aid requirements for each chemical will vary, users must make themselves familiar with the particular MSDS. However the following is generic information that may be used</p> <ul style="list-style-type: none"> Whenever first aid is required for the treatment of chemical exposure, always seek medical assistance If swallowed, rinse mouth with water. Give glass of water. Do not induce vomiting, as inhaling vapours or vomit (aspiration) can cause damage to the lungs, and exposure to vomit can cause damage to the mouth, throat and digestive tract In the event of skin exposure to chemicals, remove any contaminated clothing and wash skin or hair with running water as per MSDS recommendations , unless directed otherwise by a medical professional or the Poison Information Centre on 131126 In the event of eye exposure to chemicals, rinse with copious amounts of running water, holding eye lids open, as per MSDS recommendations , unless directed otherwise by a medical professional or the Poison Information Centre on 131126 In the event of inhalation, remove victim from the area, remove any contaminated clothing and keep patient in a comfortable environment Never leave a victim of any type of exposure alone. Always monitor him or her continuously until professional medical help arrives Provide MSDS information to the Emergency Services on their arrival, if requested to do so
Fire Fighting	<p>Prior to commencing work, ensure that a suitable fire extinguisher is available and in close proximity. To determine the right fire extinguisher, refer to the MSDS. However, typically foam, carbon dioxide or white powder extinguishers are suitable for most flammable substances</p> <p>Some catalysts (catalyst is a substance which alters the rate of a chemical reaction but is chemically unchanged at the end of the reaction) create their own oxygen when they combust. When storing catalysts ensure they are stored separately from other chemicals. Ensure only minimal amounts are kept in chemical stores</p>

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Clean-up	<p>Ensure equipment and containers are removed from work area</p> <p>Clean up of fibreglass reinforcement and associated dust, this must be done so as to minimise the generation of airborne particles</p> <p>Dispose of chemicals, rags and used containers, in approved waste disposal bins</p> <p>Ensure all flammable chemicals are stored in approved flammable liquid storage locations</p>
Additional controls	
Additional controls may be required, depending on the work being carried out. Always refer to relevant SWIs and seek advice from the relevant Line Manager, if required	