



Best Practice Guide

Working safely with Hardie™ fibre cement and AAC products.

June 2026

Make sure your information is up to date.

When specifying or installing Hardie™ products, ensure that you have the current technical information and guides.

If in doubt, or you need more information, visit www.jameshardie.com.au.

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DANGER:

FIBRE CEMENT AND AAC PRODUCTS CONTAIN GREATER THAN 1% CRYSTALLINE SILICA, AND ARE CRYSTALLINE SILICA SUBSTANCES (CCS) UNDER WHS LAWS.

PROLONGUED OR REPEATED INHALATION OF DUST CREATED DURING MECHANICAL PROCESSING MAY CAUSE CANCER, OR DAMAGE TO LUNGS AND RESPIRATORY SYSTEMS.

FAILURE TO ADHERE TO OUR WARNINGS, SAFETY DATA SHEETS, AND INSTALLATION GUIDES MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.



1 Introduction

At James Hardie, we believe that safety is of paramount importance.

We are committed to helping people use our products safely and this guide aims to provide a straightforward approach to help you do this.

As well as providing important guidance on how to cut and work with Hardie™ Fibre cement and Hardie™ autoclaved aerated concrete (AAC) products to minimise the risks of exposure to respirable crystalline silica (RCS), it also provides guidance on how to minimise other risks arising from the use of the products including manual handling, potential stack or product falls when stacking or unpacking products and eye damage when using powered tools to process the products.

Additional information and guidance is available in James Hardie's Safety Data Sheets available at www.jameshardie.com.au.

Important Note: PCBU's and others have general duties under Workplace Health and Safety laws relating to worker health and safety and specific duties to manage the risk of exposure of workers to respirable crystalline silica (RCS) in the workplace. These include duties to assess the risk associated with processing activities on any products that contain more than 1% silica and duties to train and implement health surveillance programs for any workers assessed as carrying out high risk silica processing activities.

For more information about and guidance on how to comply with your duties relating to managing the risks associated with RCS, refer to the websites of Safe Work Australia and/or your applicable State or Territory WHS regulator. See in particular, the Safe Work Australia Code of Practice: Managing risks of respirable crystalline silica in the workplace.



2 Silica Awareness

2.1 WHAT IS SILICA?

Commonly known as sand or quartz, silica is the second most common mineral on earth.

Silica is found in many common building products like concrete, bricks, grout, ceramic tiles, glass, fibre cement and AAC. Silica is also found in many naturally occurring materials such as sand, rocks, clays and even some plants. It is therefore almost impossible for people not to come into contact with silica every day.



2.2 THE HAZARD

The capability to cause harm

When a silica containing material – or a crystalline silica substance (CSS) - is undisturbed, it is harmless. As a result, intact fibre cement and AAC products are not expected to result in any adverse toxic effects.

However, when a CSS is cut, drilled or otherwise abraded, respirable crystalline silica (RCS) is released as dust particles so small, they are invisible to the naked eye. Because these particles are so small, they can stay in the air for a long time and, if inhaled, can penetrate deep into the lungs.

Breathing in RCS can cause serious irreversible lung diseases like silicosis and lung cancer. These diseases can take years to show symptoms and may keep getting worse even after stopping exposure to RCS. All silica-related diseases are preventable by using controls that eliminate or effectively minimise exposure to RCS.

2.3 THE RISK

The likelihood of the hazard causing harm

Factors that affect the degree of risk arising from exposure to RCS include:

- Level of exposure
- Duration and frequency of exposure
- External health factors (e.g. lifestyle, genetics, smoking)

Short term exposure to very high levels of silica dust can result in the occurrence of acute silicosis within a few weeks or years. At the other end of the scale, long term and prolonged or repeated inhalation of lower levels of RCS can cause damage to the lungs and respiratory system resulting in chronic silicosis.



Respirable Crystalline Silica is an occupational hazard and must be managed by adopting best practices, including use of appropriate tooling, implementation of appropriate systems, provision of appropriate training and health monitoring for workers and ensuring correct use of Respiratory Protective Equipment (RPE).

Click [here](#) to view a copy of the Hardie™ fibre cement and AAC SDS.



3 Best Practice

3.1 WORKING SAFELY WITH HARDIE™ PRODUCTS

James Hardie believes that safety is of paramount importance and is committed to enabling the safe use of our products and safer work sites.

This guide provides information on what we consider to be the current best practices on how to work safely with Hardie™ products. Further guidance and information is available in our SDSs for our Hardie™ fibre cement products and Hardie™ AAC products as well as on the Safe Work Australia and State and Territory WHS Regulator websites.

For technical information on the installation of our products, refer to the relevant product installation guides and technical specifications available at www.jameshardie.com.au.

Note: If you have concerns about silica dust exposure levels, you should always consult a qualified occupational hygienist. A directory can be found at www.aioh.org.au.

3.1.1 BEST PRACTICE RECOMMENDATIONS APPLICABLE FOR ALL CRYSTALLINE SILICA SUBSTANCES (CSSS)

A. SANDING, REBATING, DRILLING, CUTTING OR OTHER MACHINING

James Hardie encourages you to always minimise dust exposures. Therefore, when sanding, rebating, cutting, drilling or carrying out other machining of Hardie™ products you should always:

- If using a power tool, use a tool appropriate for the task equipped with a material-compatible saw blade (refer to sections 3.1.2 and 3.1.3 for further information) and connected to a H or M class vacuum (except when wet cutting AAC products, refer to section 3.1.3);
- Setup a dedicated working area at least 3 metres away from other workers;
- Cut outdoors where possible, ideally positioning the cutting station downwind of others on site and so that any dust is blown away from the person cutting;
- Consider periodic rotation of cutting personnel to minimise dust exposure;
- Ensure workers wear a properly fitted P2 mask or respirator and are trained, fit tested and clean shaven as per AS/NZ1715 or wear a powered air purifying respirator (PAPR) with a P2 or P3 filter; and
- Ensure workers wear appropriate hearing and eye protection.

Always ensure to:

- Replace filter bags regularly, particularly when visible dust expressed from the saw increases; and
- Seal shut used filter bags and place them inside a second plastic bag before landfill disposal.



When using a power saw (e.g. track plunge saw, or drop saw), dusts released must be controlled by local exhaust ventilation (LEV) during work activity.

3 Best Practice (Continued)

B. CLEAN UP AND GENERAL HOUSE KEEPING

Poor housekeeping methods that disturb accumulated dust on workplace surfaces can also lead to increased RCS exposure. You should always:

- Use an M or H class vacuum to clean up dust; and
- Put full vacuum bags and/or filters in a sealed bag before disposal; and
- If wet cutting or using water to clean up, clean up dust slurry before it dries and put in a sealed bag before disposal.

To minimise risk of exposure when cleaning up, always ensure workers wear a properly fitted P2 respirator and are trained, fit tested and clean shaven as per AS/NZ1715 or wear a powered air purifying respirator (PAPR) with a P2 or P3 filter.

Do not:

- Dry sweep – this is prohibited by WHS legislation; and
- Use compressed air or high-pressure water cleaners; and
- Use general-purpose vacuum cleaners not designed for use with hazardous dusts.

If doing anything that generates dust, follow James Hardie best practice recommendations to reduce or limit the release of dust, warn others in the area and consider rotating personnel performing the task to further limit RCS exposure.

C. CORRECT USE OF RESPIRATORY PROTECTIVE EQUIPMENT

If using or requiring workers to wear a dust mask, at a minimum use a correctly fitted AS/NZS1716 P2 filter.

If using or requiring the use of a tight fitting dust mask, you must ensure:

- The dust mask has been correctly fitted; and
- The wearer is clean shaven, or

Alternatively, use or require the use of a powered air purifying respirator (PAPR) with a P2 or P3 filter.

Refer to Australian/New Zealand Standard 1715:2009 Selection, Use and Maintenance of Respiratory Protective Equipment for more extensive guidance and more options for selecting respirators for workplaces.

3 Best Practice (Continued)

3.2 BEST PRACTICE FOR CUTTING AND WORKING WITH HARDIE™ FIBRE CEMENT PRODUCTS

In addition to the best practice processing recommendations set out in section 3.1.1 applicable to all CSSs, when cutting Hardie™ fibre cement products always use one of the following recommended methods, based on the cutting rate and standard of finish required.

LOWEST RISK – RECOMMENDED IF REASONABLY PRACTICABLE

When reasonably practicable, always use a manual cutting method to minimize dust production.

Options available include:

- Villaboard™ Score and Snap Knife
- Hand guillotine
- Fibreshears

Note: While these tools produce insignificant amounts of respirable crystalline silica dust when cutting fibre cement, some state or local regulations may nevertheless require additional dust controls to be used.

NEXT LOWEST RISK ALTERNATIVE

If manual cutting methods are not suitable for the product being cut or the required finish, power tools may be used subject to always ensuring you:

- Use a polycrystalline diamond (PCD) tipped fibre cement blade with:
 - As few teeth as possible (typically four for a 160 mm diameter blade)
 - Narrow kerf (approximately 1.8–2.2 mm)
 - Set the blade depth so it protrudes 2–3 mm below the board underside;
- Always use a saw with the maximum possible shrouded blade (e.g. plunge, track or drop saw);
- Always connect the saw to a H or M class vacuum;
- Never use a grinder; and
- Always cut outdoors or in a well-ventilated area.



Important Note: if cutting outside is not possible, seek advice from a qualified occupational hygienist on whether the area is sufficiently ventilated or on how to set up an appropriate “cutting room/area” with sufficient localised exhaust ventilation.

3 Best Practice (Continued)

HANDLING & STORAGE

Hardie™ products are robust and durable when installed and maintained in accordance with James Hardie's published literature current at the time of purchase.

WORKING WITH HARDIE™ FIBRE CEMENT PRODUCTS

HANDLING

For Planked Products

- Do not lift planked products flat and in the middle (Figure 3);
- Carry the products on edge (Figure 4);
- If only one person is carrying the product, hold it in the middle and spread arms shoulder-width apart to better support the product (Figure 5);
- If two people are carrying the plank, hold it near each end and on edge (Figure 6);
- Always wear gloves when handling the products.



For Panel Products

- Carry with two people (Figure 7);
- Hold the panel on its side, ensuring the product load is distributed across the length of product;
- Exercise care when handling panel products to avoid damaging the corner; and
- Always wear gloves when handling the products.

STORAGE

It is important to keep the product dry in storage and during installation. If the product becomes saturated prior to installation the following can occur:

- **SHRINKAGE** post installation;
- **STAINING** a deposit of soluble salts, usually white in colour;
- **DIFFICULTY** in handling due to the increased weight and added flexibility once saturated.

3 Best Practice

3.3 BEST PRACTICE FOR CUTTING AND WORKING WITH HARDIE™ AAC PRODUCTS

In addition to the best practice recommendations set out in section 3.1.1 applicable to all CSSs, when cutting Hardie™ AAC products, use one of the following recommended methods:

WET CUTTING

Use an effective wet dust suppression method ensuring you:

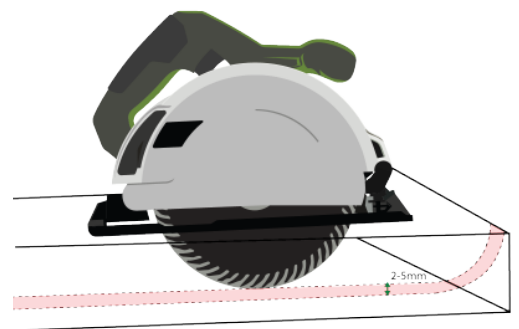
- Use appropriate equipment that is fit for purpose including:
 - Having an appropriate ingress protection (IP) rating to ensure it is sufficiently waterproof;
 - Having a consistent water flow and adequate water pressure during operation;
 - Having the water feed attached and adequately directed at the material and/or blade to prevent dust being released.
- Take all appropriate safety precautions required for working in a wet environment including but not limited to:
 - Installing or creating a non-slip floor and providing workers with waterproof aprons, waterproof and non-slip footwear and anti-fog eye protection;
 - Making sure run-off water is drained away from the equipment and all work areas; and
 - Dust slurry is cleaned up and put in sealed bags before it dries creating a risk of dust becoming airborne.

CONTROLLED DRY CUTTING

If wet cutting methods are not available or suitable, Hardie™ AAC may be cut using an appropriate power saw attached to an M or H class vacuum, which must only be employed on outdoor cutting applications.

To minimise dust creation and assist in dust capture:

- Use an AAC compatible turbo diamond impregnated blade;
- Set blade depth 2–5 mm short of cutting through the underside of the panel to improve dust capture;
- Stop cutting just before the blade exits the panel edge; separate the pieces by lifting one of the pieces; and always
- attach saw to an M or H class vacuum.



WET AND DRY CUTTING

- Ideally, position the cutting station downwind and at least 3 meters away from other workers;
- Always cut outdoors or in a well-ventilated area;
- Warn other workers in the area of the risk;
- Always ensure workers wear appropriate hearing and eye protection;
- Always ensure workers wear a properly fitted P2 respirator and are trained, fit tested and clean shaven as per AS/NZ1715 or wear a powered air purifying respirator (PAPR) with a P2 or P3 filter.



3 Best Practice

3.3.1 BEST PRACTICE FOR HANDLING HARDIE™ AAC PRODUCTS

James Hardie recommends the following:

- Hardie™ AAC panels are heavy and should be handled using mechanical aids whenever possible, such as trolleys, cranes, or forklifts to move the panels on site and minimise risks associated with manual handling;
- Whilst considering the need to locate the cutting station away from other workers to minimise risk of exposure to RCS, position the pallets of product so as to minimise the distance the panels need to be transported to the cutting station and point of installation;
- Ensure the space between the pallet, cutting station and working area is clear to reduce the risk of accidents while moving the panels;
- When moving a panel by hand, to avoid risk of damage to the panel, always carry the panel on its side, not flat; (Figure 8)
- Ensure workers wear appropriate gloves when handling Hardie™ AAC products;
- Take care when releasing the pallet straps to minimise the risk of a panel(s) falling and the risk of injury from a strap springing back; and;
- Always brace or restrap opened packs to prevent panels falling.



3.3.2 BEST PRACTICE FOR HARDIE™ AAC PRODUCTS ON-SITE STORAGE

James Hardie recommends storing all Hardie™ AAC products indoors and kept dry prior to installation. If the product gets wet, always allow it to fully dry before applying the finishing system. To help prevent injuries and product damage, always ensure to:

- Only place the pallets on level and stable ground, and never on footpaths or areas of high traffic;
- Take care when releasing the straps on pallets to minimise the risk of a panel(s) falling and the risk of injury from a strap springing back;
- Always brace or restrap opened packs to prevent panels falling;
- Ensure workers wear appropriate gloves when handling AAC products;
- When stacking pallets of Hardie™ AAC products:
 - Never stack more than two pallets high on site (Figure 10); and
 - Ensure the pack edges and pallet supports are aligned (Figure 9); and
- Never remove the straps from stacked packs.

Fig. 9

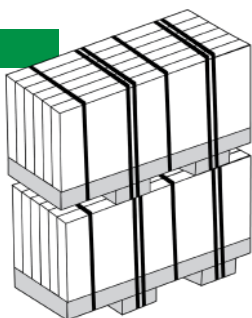


Fig. 10



4 Minimising Respirable Crystalline Silica Dust Exposure

4.1 OVERVIEW

For more information see Section 3.1

	Cut Outdoors Ventilation outdoors is better than indoors. This enables faster dispersion of any dust and reduces the risk of exposure. James Hardie recommends always cutting outdoors when using power saws.
	Use The Right Tool For The Right Product A variety of tools can be used when cutting Hardie™ products. See table in Section 4.2 for details of the best tool for the job depending on product and finish required.
	On-Tool Dust Extraction Use on-tool dust extraction when using power tools to drill. Vacuum must be H or M class rated. WITH You must attach an M or H class vacuum to any power tool used to process a CSS (e.g. when cutting, drilling, sanding, rebating etc.)
	Use an Appropriate Respirator When cutting, sanding, rebating, drilling or machining Hardie™ products, always wear your P2 respirator (correctly fitted in accordance with manufacturer's instructions) and ask others in close vicinity to do the same.
	Clean-up Methods Make sure you clean up dust and slurry BUT never dry sweep. Always use a H or M Class vacuum or low pressure water. When removing and handling silica waste (including vacuum bags), do so in such way that stops RCS from being released into the air. This could be managed by double bagging wet and dry waste before placing it in a covered bin or container.
	Additional Administrative Control Options Consider rotating personnel performing the silica processing activity and staging processing activities across more than one day to further limit RCS exposure.

4.2 ACTIVITY & TOOLING

The below table provides an overview of common processing activities undertaken with Hardie™ products.

Select the appropriate tooling for the activity to be performed depending on the environment in which it'll occur and level of finish required [note the information about finish needs to be added to the table]

Activity	Recommended Tooling	Recommended Environment	Recommended Controls	
			Respiratory Protective Equipment	Dust Control Method
Cutting	▪ Track Saw	Outdoors	P2 Respirator*	Tool equipped with dust extraction system; vacuum must be H or M class rated.
	▪ Drop Saw			
	▪ Plunge Saw			
	▪ Fibreshears	Indoors or Outdoors	P2 Respirator*	If cutting indoors, use alternate equipment such as fibreshears, hand guillotine or score and snap knife. Preferred option is to cut outdoors with recommended dust control method.
	▪ Hand Guillotine			
	▪ Score and Snap Knife			
Drilling	▪ Drill	Outdoors if reasonably practicable	P2 Respirator*	Tool equipped with dust extraction system; vacuum must be H or M class rated.
	▪ Hole Saw			
Sanding / Abrasion	▪ Sander	Outdoors	P2 Respirator*	Tool equipped with dust extraction system; vacuum must be H or M class rated.

*If using a tight fitting respirator, wearer must be fit tested for respirator being used and clean shaven.



**For information and advice
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June 2026

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