



**Safety**

## Best practice guide

Working safely with fibre cement products



**James Hardie**

A smarter way to build

January 2011

Silica can be an occupational hazard for the whole industry but can be managed by adopting best practices, which includes appropriate tooling.

# Why should I read this?

To work safely, you need to understand the hazards and know how to minimise the risks.

At James Hardie we believe that safety should be of paramount importance to everyone. We are committed to the safe use of our products.

This guide is a straightforward approach to job site safety through the use of best practices with James Hardie® products.

It's good to remember that 'Best Practice' is much more than simply a 'strong suggestion'. It is a work ethic that if followed has tangible benefits that will positively influence your quality of work and wellbeing, leading to greater efficiency, and importantly, improved work site safety.



## Best Practice – A three stage approach

Silica can be an occupational hazard for the whole industry but can be managed by adopting best practices, which includes appropriate tooling.

- 1 Silica Awareness
- 2 Best Practice
- 3 Tools



# 1 Silica Awareness

Silica is the second most common mineral on earth and is found in many common building products.

# What is silica?

Commonly known as sand or quartz, silica is the second most common mineral on earth and is found in many common building products.

Silica is commonly found in building products like concrete, bricks, grout, wallboard, ceramic tiles, glass, dirt and all fibre cement material such as James Hardie® manufactured building products. It would almost be impossible for people not to come into contact with silica every day.

## The hazard

### The capability to cause harm

Silica when it's intact is harmless. However when it is cut, drilled or otherwise abraded silica is released as fine particles that can be inhaled deep into the lungs.

Breathing excessive amounts of respirable silica can cause a potentially fatal lung disease called silicosis, and has been linked with other diseases. Some international authorities consider respirable silica to be a cause of cancer. Some studies suggest smoking may increase these risks.

## The risk

### The likelihood of the hazard causing harm

James Hardie Best Practice recommendations are designed to minimise the risk of harm from silica exposure. James Hardie® products meet or exceed all applicable government safety standards when used in accordance with best practice including recommended tooling guidelines.

## Risk Factors

- Exposure concentration
- Duration and frequency of exposure
- External health factors



## 2 Best Practice

James Hardie is committed to safe use of its products and safety of your work site.

# Job site best practice

James Hardie believes that safety is of paramount importance to everyone and is committed to safe use of our products and safety of your work site.

Best practice information on all James Hardie® products can be found in our installation instructions and technical specifications or at [www.jameshardie.com.au](http://www.jameshardie.com.au). If there is additional concern about silica exposure levels, you should always consult a qualified industrial hygienist. A directory can be found at [www.aioh.org.au](http://www.aioh.org.au).

## 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 fibre cement products, as well as following our recommended cutting instructions, you should always wear wear a P1 or P2 respirator and warn others in the immediate area.

## Cutting indoors

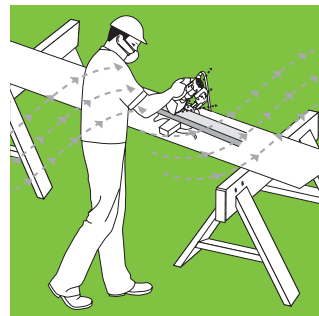
Cut using only score and snap, hand guillotine or fibreshears (manual, electric or pneumatic).

## Cutting outdoors

Position cutting station so that wind will blow dust away from user or others working in the area. Use one of the following methods based on the required cutting rate:

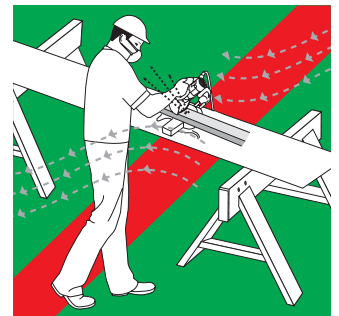
- Best**
- Score and snap
  - Hand guillotine
  - Fibreshear
- Good**
- Dust-reducing circular saw equipped with HardieBlade™ Saw Blade connected to a vacuum with HEPA filter

**Note** Cutting recommendations vary from product to product. Refer to our installation guides or technical specifications for product-specific best practice recommendations.



### Correct

Dust blown away from user breathing zone



### Wrong

Dust blown into user breathing zone

# Handling and storage of James Hardie® products

James Hardie® products are robust and durable once installed. It is important to keep the product dry in storage and during installation.

If product becomes saturated prior to installation the following can occur.

- Shrinkage at joints
- Staining: A deposit of soluble salts, usually white in colour
- Difficulty in handling due to the increased weight and added flexibility once saturated

(James Hardie is not responsible for damage due to improper storage and handling.)

## Storage

### Products should be:

- Stored in their original packaging in a covered area when possible
- Covered on a pallet and must not be stored directly on the ground (figure 1)
- Protected with a waterproof covering, if storage outside is unavoidable (figure 2)
- Stored flat and above ground (figure 1)

## Handling

A few simple techniques make handling of James Hardie materials a breeze.

### 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 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)

### For panel products

- Carry with two people (figure 8)
- Do not hold near each end and on edge
- Exercise care when handling panel products to avoid damaging the corner



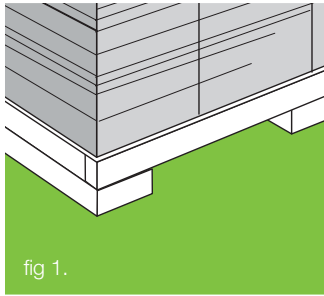


fig 1.

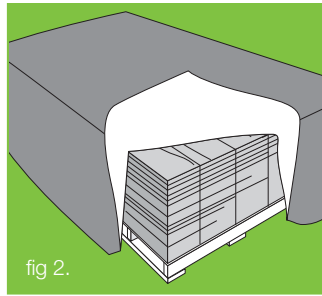


fig 2.

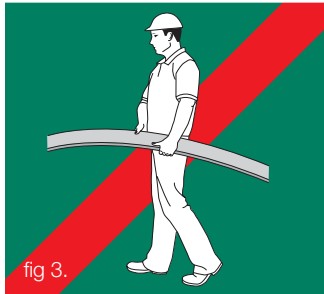


fig 3.

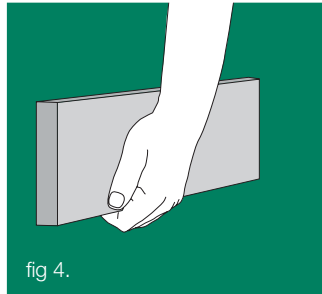


fig 4.

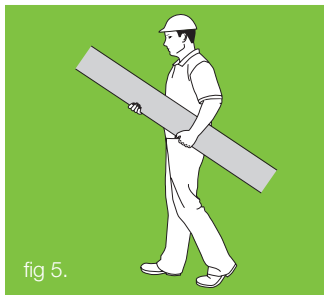


fig 5.

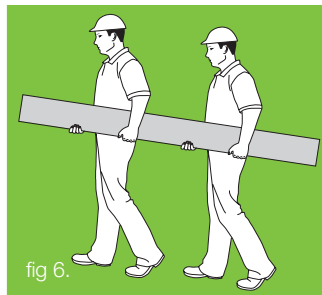


fig 6.

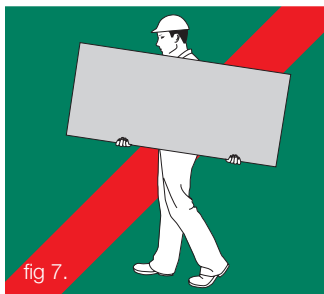


fig 7.

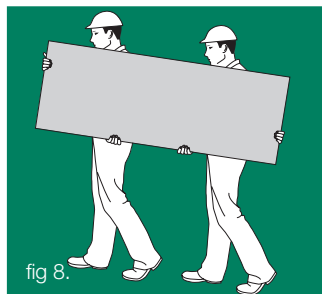


fig 8.

## Important Notes

- For maximum protection (lowest respirable dust exposure), James Hardie recommends always using “Best” level cutting methods where feasible
- NEVER use a power saw indoors
- NEVER use a circular saw blade that does not carry the HardieBlade™ logo
- NEVER dry sweep — use wet suppression or HEPA vacuum
- NEVER use grinders without appropriate respiratory protection (e.g. minimum P1 or P2 respirator)
- ALWAYS follow tool manufacturer’s safety recommendations
- P1 and P2 respirators can be used in conjunction with cutting practices to further reduce dust exposure



# 3 Tools

HardieBlade™ saw blade is designed specifically for fibre cement and produces less respirable dust than traditional masonry blades.

# Tools

James Hardie® has been actively working with tool and blade manufacturers to develop tools specifically to minimise dust exposure.

## HARDIEBLADE™ SAW BLADE

The only blade recommended by James Hardie.

**NEVER USE A CARBIDE FRAMING BLADE OR CONTINUOUS RIM DIAMOND BLADE.**

HardieBlade Saw Blade generates larger dust particles and reduces the risk of respirable silica.

The 185mm diamond tip HardieBlade Saw Blade fits a dust reducing 185mm circular saw and the Makita LS0714 190mm dual slide compound mitre saw. Always use circular saws outdoors and in a well ventilated area.

## MAKITA 5057KB 185MM CIRCULAR SAW

- Easily attaches to tool start vacuum with HEPA filter to further reduce dust exposure
- Remote guard lever allows for plunge cutting
- Fully enclosed upper guard
- Rigid aluminium base provides greater stability and accuracy
- 60mm cutting depth capacity
- 90° to 45° base adjustment
- Easy emptying dust collector



## HITACHI C7YA 185MM CIRCULAR SAW

- Easily attaches to tool start vacuum with HEPA filter to further reduce dust exposure
- Dust reducing operation for user comfort and safety
- Powerful industrial 1,400 watt motor
- Lightweight and well balanced
- Specifically built for cutting fibre cement sheet
- Dust deflector directs dust away from operator



## MAKITA LSO714 190MM DUAL SLIDE COMPOUND MITRE SAW

- Easily attaches to tool start vacuum with HEPA filter to further reduce dust exposure
- Double slide action
- Huge 300mm width of cut
- Geared drive system
- Depth stop adjustments for trenching
- Removable lock off button for safety and security
- Large stable base



## HITACHI RP307Y TOOL START VACUUM WITH HEPA FILTER

- Wet and dry operation
- Durable stainless steel casing
- Heavy-duty 1,200 watt motor
- Automatic switch outlet for ease of use

## MAKITA 446L TOOL START VACUUM WITH HEPA FILTER

- Unique impulse filter cleaning system allows filter to be cleaned efficiently without stopping, increasing productivity and filter life
- Capable of both wet and dry applications
- Easily converts from dust extraction to a powerful industrial vacuum cleaner
- Automatic on/off system allows the unit to be switched on and off automatically from your connected power tool
- Solid, robust and compact design suited for job site requirements

James Hardie® recommends the use of a tool start vacuum fitted with a paper dust bag and HEPA filter for efficient dust collection and performance.



## FIBRESHEAR CUTTING TOOL

- Heavy-duty cutting tool is a quick and efficient way to cut a range of James Hardie® building products
- Effortlessly cuts in straight or curved lines
- For effective cutting of fibre cement up to 9mm thickness

## HITACHI EASYBEVEL 797006/8912 125MM ANGLE GRINDER

- An efficient tool for rebating the cut edges of Villaboard® lining and HardieTex™ sheets
- Dust is collected via the dust port and must connect to a vacuum with HEPA filter
- Wear P1 or P2 respirator or appropriate respirator when using Easybevel

## GUILLOTINE

- For effective cutting of fibre cement up to 9mm thickness

## SCORE AND SNAP KNIFE

- A tungsten-tipped knife for scoring cement sheets



### WARNING - DO NOT BREATHE DUST AND CUT ONLY IN WELL VENTILATED AREA

James Hardie products contain sand, a source of respirable crystalline silica which is considered by some international authorities to be a cause of cancer from some occupational sources. Breathing excessive amounts of respirable silica dust can also cause a disabling and potentially fatal lung disease called silicosis, and has been linked with other diseases. Some studies suggest smoking may increase these risks. During installation or handling: (1) work in outdoor areas with ample ventilation; (2) minimise dust when cutting by using either 'score and snap' knife, fibre cement shears or, where not feasible, use a HardieBlade™ saw blade and dust reducing circular saw attached to a HEPA vacuum; (3) warn others in the immediate area to avoid breathing dust; (4) wear a properly fitted, approved dust mask or respirator (e.g. P1 or P2) in accordance with applicable government regulations and manufacturer instructions to further limit respirable silica exposures. During clean-up, use HEPA vacuums or wet cleanup methods - never dry sweep. For further information, refer to our installation instructions and Material Safety Data Sheets available at [www.jameshardie.com.au](http://www.jameshardie.com.au). FAILURE TO ADHERE TO OUR WARNINGS, MATERIAL SAFETY DATA SHEETS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.

Additional installation  
information, warranties and  
warnings are available at  
[www.jameshardie.com.au](http://www.jameshardie.com.au)

Ask James Hardie™  
Call 13 11 03  
[www.jameshardie.com.au](http://www.jameshardie.com.au)