

HEALTH HAZARD INFORMATION

The grit from the surface of Hebel blocks and panels is not respirable. When panel bundles have been installed, the grit left on the floor should be swept up to prevent it being ground into a dust by pedestrian or equipment traffic.

As with all cement-based products, such as concrete slabs, concrete blocks and concrete tiles, contact with Hebel blocks or panels may irritate the skin, resulting in itchiness and occasionally a red rash. Particles in the eye are irritating and corrosive, causing watering and redness, and may result in corneal inflammation and ulceration. The wearing of gloves and suitable clothing to reduce abrasion and irritation of the skin is recommended when handling Hebel and other cement based products, and eye protection is recommended where particles may enter the eye. As with all cement-based products, it is recommended that clothing be washed separately to prevent transfer of cement particles to other clothing.

The use of power tools for cutting, drilling, routing, chasing, sanding or breaking up of silica based products may create dust which contains respirable crystalline silica. Repeated and prolonged exposure to high levels of respirable crystalline silica dust may result in bronchitis, silicosis and an increased risk of lung cancer. Use dust extractors on powered cutting, routing or chasing tools and wear a P2 dust type mask when drilling, cutting, chasing, routing, sanding or breaking up all silica based products, such as Hebel blocks, Hebel panels, bricks, concrete blocks, fibre cement, concrete and terracotta tiles, sandstone, aggregates, and concrete slabs & columns.

TRAINING

Personnel installing Hebel Wall systems should receive training in the safety & technical aspects of the installation work. This training should include the following safety information:

- The components of Hebel Wall Systems.
- Composition of Hebel Aerated Autoclaved Concrete (AAC), Thin bed Adhesive & Thick bed Mortar.
- Working safely with products containing crystalline silica.
- Safe mixing of Hebel Thin bed Adhesive & Thick bed Mortar.
- Safe cutting of Hebel Powerpanels.
- Manual handling of Hebel Powerpanels.
- Use & maintenance of PPE.

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SAFE WORK METHODS

Every job a Contract Installer performs will have a number of hazards associated with it. Before commencing work the Installation Contractor, in consultation with employees, shall conduct a risk assessment of the job, & develop safe work methods that address the identified hazards. The attached forms list some of the common hazards that will be present at most installation sites and some of the common risk control measures that may be used to control these hazards.

Because job and site conditions vary from project to project, it is essential that Installation Contractor identify the particular hazards associated with every installation job they perform and take steps to control the risks associated with each identified hazard. In conducting the Job Safety Analysis the Contract Installer shall be alert for and consider other hazards that may not be listed on the attached forms.

SUPERVISION

The Installation Contractor shall adequately supervise employees to ensure that they understand & follow the safe work methods that are developed.

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Main Activity			Risk Controls	Risk Score	Responsibility
	SUB TASKS	POTENTIAL HAZARDS			
Delivery of Hebel Powerpanel to site	Unloading near power lines	Contact with power lines could cause electrocution	 When unloading in the proximity of low voltage overhead power lines must not operate within 3 metres horizontally or vertically of the power lines. When unloading will in the proximity of high voltage overhead power lines must not operate within 6 metres horizontally or vertically of the power lines. 	15-Moderate	Crane Truck operator
	Unloading Powerpanel by forklift.	Load exceeds lift capacity of fork lift	 Ensure fork lift driver is trained & licensed Ensure fork lift has sufficient load capacity 2 metre exclusion zone from forklift or its load 	10-Moderate	Employer
		Fork lift may tip or drop panel bundle causing striking / crush	 Check for pot holes & uneven ground Unload on level surfaces Drive loaded forklifts backwards down ramps & sloping surfaces Drive at appropriate speed 	15-Moderate	Forklift driver
	Unloading Powerpanel by crane Truck.	Panels may be damaged by wire slings	 Use webbing slings of suitable lifting capacity. Do not use a sling if the capacity tag is missing. Inspect slings for damage before use against the criteria specified by the sling manufacturer. 2 metre exclusion zone from the crane and its load 	6-Low	Crane Truck operator
		Load may tilt or swing during unloading	 Ensure placement of slings conforms with safe lifting practices and centred Ensure lifting point is centred over panel bundle before lifting. 	6-Low	Employer Crane Truck operator
	Stacking panels	Crush from panels incorrecty stacked	 Panels can be stacked 2 packs high providing they are still strapped with the blocks in place. Panels that are required to be opened and split must be destacked. 	10-Moderate	Crane Truck operator Installation Contractor

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Main Activity			Risk Controls	Risk Score	Responsibility
	SUB TASKS	POTENTIAL HAZARDS			
Transferring Hebel panel bundles to work areas	Lifting Powerpanels by crane	Panels may be damaged by wire slings	 Use webbing slings of suitable lifting capacity. Do not use a sling if the capacity tag is missing. Inspect slings for damage before use against the criteria specified by the sling manufacturer. 2 metre exclusion zone from the crane and its load 	10-Moderate	Crane Truck operator
		Load may tilt or swing during unloading	 Ensure placement of slings conforms with safe lifting practices Ensure lifting point is centred over panel bundle before lifting. Guide load to prevent it swinging. 	10-Moderate	Crane Truck operator
		Load may exceed capacity of loading deck or floor	Check with builder that loading deck & floor will support weight of bundles	15-Moderate	Installation Contractor
	Moving bundles across floor	Manual handling injuries	 Use skates, trolleys and pallet jacks to move panel bundles Use two man lift as required 	9-Moderate	Installation Contractor
		Falls through openings & trip hazards	Inspect route for moving panels for trip hazardsEnsure all penetrations are safely covered.	9-Moderate	Installation Contractor
Use of Power Tools		Faulty equipment may cause injury.	 Ensure all tools & equipment are in safe working condition & are adequately guarded and tagged. Ensure that tools and equipment are adequately maintained and used in accordance with the manufacturer's instructions. 	5-Low	Installation Contractor
		Worker could be electrocuted	All electrical equipment to be tested and tagged in accordance with the relevant standards.	10-Moderate	Installation Contractor
			Use Earth Leakage current protection (RCD's).	10-Moderate	Installation Contractor
			Temporary power boards to be correctly set up.	10-Moderate	Installation Contractor
			Multi-plug electrical devices comply with AS/NZS-3105.	10-Moderate	Installation Contractor

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Main Activity			Risk Controls	Risk Score	Responsibility
	SUB TASKS	POTENTIAL HAZARDS			
			Keep extension leads clear of ground and water.	10-Moderate	Installation Contractor
			Use double insulated electrical tools.	10-Moderate	Installation Contractor
Installing the Top hat Batten	Storage of Top hat Batten	May present a trip hazard	Ensure top hat battens are stored in a safe location away from general thoroughfares.	5-Low	Installation Contractor
	Cutting Top hat Batten	Sharp edges on cut surfaces	Wear gloves complying with AS/NZS-2161.3 for mechanical protection.	5-Low	Installation Contractor
		Particles from cutting with cut off saw or angle grinder may damage eyes	 Wear safety glasses or goggles complying with AS/NZS-1337 for medium (Class I) or high (Class V) impact. Follow manufacturers' instructions for safe use of tools. 	5-Low	Installation Contractor
		Off cuts left on floor	Place off cuts in bin or safe storage area.	6-Low	Installation Contractor
		Fall from height	Use scaffold or step ladder in accordance with manufacturers' instructions & Australian Standards.	10-Moderate	Installation Contractor
Cutting of Hebel Powerpanels	Removing panels from the bundle	Metal packaging corners left on floor	Place metal corners in bin or safe storage area.	5-Low	Installation Contractor
		Manual handling injuries	Use Hebel Powerpanel trolley.	9-Moderate	Installation Contractor
		Other panels may fall over	If necessary, provide temporary bracing of panels. A length of angle can be nailed across the top of the bundle as a simple brace.	9-Moderate	Installation Contractor
	Sawing panels	Blade may shatter on impact with steel reinforcing	 Use segmented diamond tipped cutting blade with the correct bonding matrix. Wear safety glasses or goggles complying with AS/NZS-1337 	10-Moderate	Installation Contractor
			for medium (Class I) or high (Class V) impact. Follow manufacturers' instructions for safe use of tools		
		Particles from cutting may	Wear safety glasses or goggles complying with AS/NZS-1337 for medium (Class I) or high (Class V) impact.	5-Low	Installation Contractor

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	SUB TASKS	POTENTIAL HAZARDS			
		damage eyes	Follow manufacturers' instructions for safe use of tools		
		Inhalation of silica dust	 Person operating the power saw must wear a P2 half face respirator during cutting Dust extraction must be fitted to power saws Clean out the dust cowling on the saw at least daily to eliminate blockages & maintain good dust extraction. Adjust dust cowlings on power saws to provide maximum enclosure for dust collection. Check dust extractors regularly to ensure seals are in good condition & they are providing good suction Empty dust bags regularly. Ensure that disposable bags are tied off to prevent the dust falling out of the bag. If reusable bags are used, then the contents should be emptied into a plastic bag that is tied off before disposal. For dust extractors fitted with secondary filters, clean the secondary filter daily using another dust extractor. Set the depth of cut to 2mm less than the thickness of the panel on power saws to prevent blow through of dust 	6-Low	Installation Contractor Installation Contractor
		Dust may cause skin irritation	 during cutting Wear gloves complying with AS/NZS-2161.3 for mechanical protection when handling the product to prevent skin irritation & abrasion. Consider the use of long sleeved shirts & long trousers if irritation occurs. Launder clothing regularly & separately. 	1-Low	Installation Contractor
		Noise may damage hearing	Wear earplugs or earmuffs during cutting.	10-Moderate	Installation Contractor
		Off cuts of panels may be a trip hazard	Place panel off cuts in bin or safe storage area.	5-Low	Installation Contractor

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Main Activity			Risk Controls	Risk Score	Responsibility
	SUB TASKS	POTENTIAL HAZARDS			
Mixing Hebel Thin Bed Adhesive & Thick Bed Mortar	Handling 20 kg bags	Back injury	 Use trolleys, wheelbarrows & other aids to assist with moving bags. Maintain clearance around & above stored bags to avoid lifting with awkward postures. When lifting from low heights bend the knees to a semisquat position with feet about shoulder width apart, lean over from the hips, and keeping the back straight with the tail pushed out. Carry loads close to the body. Avoid twisting. Turn by using small steps. 	9-Moderate	Installation Contractor
	Mixing the adhesive or mortar.	Inhalation of silica dust	 Add water to mixing containers before adding adhesive or mortar to reduce dust. Wear class P2 respirator when tipping contents of bag into container & when mixing. 	6-Low	Installation Contractor
		Eye irritation from contact with dust or wet adhesive/mortar.	 Wear safety glasses or goggles complying with AS/NZS-1337 while handling open bags & when mixing. Do not use excessive speed when stirring. A variable speed drill is preferable. Ensure the stirrer has completely stopped rotating before removing from the mix to avoid splashing of the wet adhesive or mortar. 	5-Low	Installation Contractor
		Contact with the skin may cause irritation, burning of the skin or dermatitis.	 Avoid repeated contact by wearing gloves complying with AS/NZS-2161.3 for mechanical protection when handling the dry & wet adhesive & mortar. Do not use excessive speed when stirring. A variable speed drill is preferable. Ensure the stirrer has completely stopped rotating before removing from the mix to avoid splashing of the wet adhesive or mortar. Consider the use of long sleeved shirts & long trousers if 	3-Low	Installation Contractor

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	SUB TASKS	POTENTIAL HAZARDS			
			irritation occurs.		
		Electric drill may burn out.	Ensure the drill has sufficient power to operate the stirrer.	3-Low	Installation Contractor
		Half empty bags may present a trip hazard	Place empty bags in bin or safe storage area.Ensure partly used bags are safely stored.	5-Low	Installation Contractor
Erecting Hebel Powerpanels	Applying thin bed adhesive & thick bed mortar	Eye irritation from contact with wet adhesive or mortar.	 Wear safety glasses or goggles complying with AS/NZS- 1337. 	5-Low	Installation Contractor
		Contact with the skin may cause irritation, burning of the skin or dermatitis.	 Avoid repeated contact by wearing gloves complying with AS 2161.3 for mechanical protection when handling the wet adhesive & mortar. Consider the use of long sleeved shirts & long trousers if irritation occurs. 	3-Low	Installation Contractor
	Moving panels to the installation area.	Manual handling injury	 Use Hebel Powerpanel trolley. If Powerpanel trolley is not to be used, then conduct a risk assessment to develop an alternative method for safely handling the Powerpanels. 	9-Moderate	Installation Contractor
	Lifting panels into position and securing	Manual handling injury	 Before each lift the installers should assess how they will install the panel, considering the particular aspects & obstructions for the lift. Use 2 people to lift panels into position. Where longer panels are being installed, or where the lift is awkward, a 3rd person may be required to guide the panel into position. Use Powerpanel lifters on each side of the panel positioned so that the lift is achieved using the legs & so that the arms 	9-Moderate	Installation Contractor

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	SUB TASKS	POTENTIAL HAZARDS			
			 are straight when the panel is lifted. Stabilise the panel while lifting using the shoulder or free hand. Ensure when securing panels that no person stands beneath to prevent inhalation of dust 		
		Crush & abrasion injuries to hands or arms	 Before each lift the installers should assess how they will install the panel, considering the particular aspects & obstructions for the lift. Wear gloves complying with AS/NZS-2161.3 for mechanical protection to avoid abrasion to the hands. 	4-Low	Installation Contractor
		Panel could fall on people working close to installation point	Ensure people not involved in the lifting remain clear of the work area until the panel is installed.	9-Moderate	Installation Contractor
	Grouting joints	Eye irritation from contact with wet adhesive or mortar.	 Wear safety glasses or goggles complying with AS/NZS- 1337. 	5-Low	Installation Contractor
		Contact with the skin may cause irritation, burning of the skin or dermatitis.	 Avoid repeated contact by wearing gloves complying with AS 2161.3 for mechanical protection when handling the wet adhesive & mortar. Consider the use of long sleeved shirts & long trousers if irritation occurs. 	3-Low	Installation Contractor
		Adhesive & mortar spillage on the floor may present a trip hazard or impede other trades.	 Clean floor regularly with a wide scraper & by sweeping. If dry dust is present then lightly dampen the area before sweeping. Sweepings that contain dusty material should be placed in disposable bags & tied off before placement in waste containers. 	5-Low	Installation Contractor
Housekeeping Summary	Removing panels from the bundle	Other panels may fall over	If necessary, provide temporary bracing of panels. A length of angle can be nailed across the top of the bundle as a simple brace.	9-Moderate	Installation Contractor

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Main Activity			Risk Controls	Risk Score	Responsibility
	SUB TASKS	POTENTIAL HAZARDS			
	Storage of Tophat Battens	May present a trip hazard	Ensure Tophats are stored in a safe location away from general thoroughfares.	5-Low	Installation Contractor
	Sawing panels	Inhalation of silica dust	 Clean the work areas regularly by scraping, vacuuming or sweeping as appropriate. Lightly dampen the area before sweeping. Sweepings that contain dusty material should be placed in disposable bags & tied off before placement in waste containers. Large particles & off cuts do not need bagging. Ensure P2 maks is worn when cutting panels 	6-Low	Installation Contractor
	General	bags of adhesive empty pallets, off cuts of panels, Tophats & corner angles may present a trip hazard	 Place empty bags, off cuts, packaging materials & corner angles in bin or safe storage area. Ensure partly used bags are safely stored. 	5-Low	Installation Contractor
	General	Tools & power leads may be a trip hazard	Ensure that tools & power leads are not left lying in areas where people may trip over them.	3-Low	Installation Contractor
PPE Summary	Cutting the Tophat	Sharp edges on cut surfaces	Wear gloves complying with AS/NZS-2161.3 for mechanical protection as required	3-Low	Installation Contractor
		Particles from cutting with cut off saw or angle grinder may damage eyes	Wear safety glasses or goggles complying with AS/NZS-1337 for medium (Class I) or high (Class V) impact.	3-Low	Installation Contractor
	Removing panels from the bundle	Other panels may fall over	If necessary, provide temporary bracing of panels. A length of angle can be nailed across the top of the bundle as a simple brace.	9-Moderate	Installation Contractor
	Sawing panels	Blade may shatter on impact with steel reinforcing	Wear safety glasses or goggles complying with AS/NZS-1337 for medium (Class I) or high (Class V) impact.	9-Moderate	Installation Contractor

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Main Activity			Risk Controls	Risk Score	Responsibility
	SUB TASKS	POTENTIAL HAZARDS			
		Particles from cutting may damage eyes	 Wear safety glasses or goggles complying with AS/NZS-1337 for medium (Class I) or high (Class V) impact. 	3-Low	Installation Contractor
		Inhalation of silica dust	 Person operating the power saw must wear a P2 dust mask during cutting 	6-Low	Installation Contractor
		Dust may cause skin irritation	 Wear gloves complying with AS/NZS-2161.3 for mechanical protection when handling the product to prevent skin irritation & abrasion. Consider the use of long sleeved shirts & long trousers if irritation occurs. 	3-Low	Installation Contractor
		Noise may damage hearing	Wear earplugs or earmuffs during cutting.	10-Moderate	Installation Contractor
	Mixing the adhesive or mortar.	Inhalation of silica dust	Wear class P2 dust mask when tipping contents of bag into container & when mixing.	6-Low	Installation Contractor
		Eye irritation from contact with dust or wet adhesive/mortar.	Wear safety glasses or goggles complying with AS/NZS-1337 while handling open bags & when mixing.	3-Low	Installation Contractor
		Contact with the skin may cause irritation, burning of the skin or dermatitis.	 Avoid repeated contact by wearing gloves complying with AS/NZS 2161.3 for mechanical protection when handling the dry & wet adhesive & mortar. Consider the use of long sleeved shirts & long trousers if irritation occurs 	3-Low	Installation Contractor
	Applying thin bed adhesive	Eye irritation from contact wet adhesive or mortar.	Wear safety glasses or goggles complying with AS/NZS- 1337.	9-Moderate	Installation Contractor
		Contact with the skin may cause irritation, burning of the skin or dermatitis.	 Avoid repeated contact by wearing gloves complying with AS/NZS-2161.3 for mechanical protection when handling the wet adhesive & mortar. Consider the use of long sleeved shirts & long trousers if 	3-Low	Installation Contractor

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	SUB TASKS	POTENTIAL HAZARDS			
			irritation occurs.		
	Lifting panels into position	Crush & abrasion injuries to hands or arms	 Wear gloves complying with AS-NZS-2161.3 for mechanical protection to avoid abrasion to the hands. 	3-Low	Installation Contractor
	Grouting joints	Eye irritation from contact wet adhesive or mortar.	 Wear safety glasses or goggles complying with AS/NZS- 1337. 	3-Low	Installation Contractor
		Contact with the skin may cause irritation, burning of the skin or dermatitis.	 Avoid repeated contact by wearing gloves complying with AS/NZS-2161.3 for mechanical protection when handling the wet adhesive & mortar. Consider the use of long sleeved shirts & long trousers if irritation occurs. 	3-Low	Installation Contractor
Cemintel Installation where applicable	Handling / fixing board	Sprain/ strain from handling sheets	 Cut sheets at the stack to reduce weight of load Ensure that if sheets are above 3 meters in length that this is a two person lift Ensure that correct manual handling techniques are used Beware of wind 	9-Moderate	Installation Contractor
	Cutting	Inhalation of silica dust	 Person operating the power saw must wear a P2 dust mask during cutting or scoring Use a fibre cement sheet cutter or scoring tool 	10-Moderate	Installation Contractor

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References: Legislation, Standards and Codes of Practice:

- Work, Health and Safety Act 2011 & Victorian OHS Act 2004
- Work, Health and Safety Regulation 2011 & Victorian OHS Regulations 2007
- Hazardous Manual tasks Code of Practice December 2011
- How to Manage Work, Health and Safety Risks Code of Practice December 2011
- Managing the Risk of Falls at Workplaces Code of Practice December 2011
- National Standard for Manual Tasks Aug 2007
- NOHSC: 2013 (1994) National Code of Practice for the Prevention of Occupational Overuse Syndrome
- CSR Hebel safety data sheets in particular Autoclaved Areated Concrete SDS (refer to csr.com.au)

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TRAINING SIGN-OFF

Having regard to the hazards and risks associated with the this SWMS, the Installation Contractors below havel been trained by their manager/ supervisor and records and sent back to their relevant managers as proof of this training being undertaken

Employee Name	Employee Signature	Date of Course	Trainer/ Supervisor Name	Trainer/ Supervisor Name	Date of Course

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