

# **Group Standard**

## **Health and Safety Risk Management**

Scope	<b>Group</b>
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## 1 Purpose

This Group Health and Safety Risk Management Standard provides the responsible line managers, with general guidance on H&S risk management.

Risk management is the foundation of an appropriate health and safety (H&S) management. Being competent in assessing and managing risks is critical to achieve our stated objectives of zero injuries and zero fatalities in HeidelbergCement.

Local measures must be implemented to comply with this Standard. Any measures taken must comply with all applicable laws and regulations, as well as with HeidelbergCement (site) Standards, guidelines, and procedures. Whenever a discrepancy occurs between local laws/ regulations and these minimum requirements, operations shall comply with the more stringent of the two.

The skill of completing a risk assessment before attempting any task is critical to ensure that our people **“take a minute”** to

- Consider the hazards (potential to cause harm)
- Assess and understand the risks (likelihood it will happen)
- Know who might be harmed (employee, contractor, 3<sup>rd</sup> parties and members of the public)
- Decide on the appropriate control measures for mitigating those risks and
- Checking that the safe system of work agreed, is appropriate today, and the next time any task is undertaken.

## 2 Objective

The objective of this Standard is to increase awareness about H&S risks, to enhance competence and to minimize the risk of accidents arising from failures to adequately manage risk. By implementing and/ or optimizing appropriate technical, organizational, and personal measures, the operations should be made as safe as possible for site personnel and those that may be affected by our operations.

## 3 Scope

This H&S Risk Management Standard is applicable at all locations and operations where HeidelbergCement Group exercises management control (HeidelbergCement sites).

Contractors working for HeidelbergCement are obligated to follow this Standard. They have to be informed about it, as they have the same responsibility to adhere to this Standard and additional HeidelbergCement Group Standards affecting their work as do HeidelbergCement employees and management.

‘Should’ and ‘can’ requirements are mandatory and need to be implemented unless there are equivalent measures in place.

*Note: Do not mistake this Standard for the “Risk Management” guideline from Group Insurance and Corporate Risk, which addresses major strategic, operational, finance, legal, and compliance risks for the HeidelbergCement Group<sup>1</sup>.*

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<sup>1</sup> See: [http://unite.groupphc.net/gicr/Pages/Corporate\\_en-US.aspx](http://unite.groupphc.net/gicr/Pages/Corporate_en-US.aspx)

## 4 Roles and responsibilities

For the management of H&S risks, there are clear definitions of roles, responsibilities and accountabilities to nominated individual managers down through the management structure:

### Managing Board and Country Executive Committees

The first and most important requirement to ensure sustainable and lasting success of all safety programs, including this safety Standard for risk management, is the visible leadership, commitment and involvement of the Managing Board of HeidelbergCement and the country executive management teams.

### Line Management

Responsibility and accountability for the implementation of this Group Standard lies with the senior local line management.

Amongst others, it is responsible for ensuring that

- All foreseeable hazards within their area of responsibility are identified and documented
- All risks associated with the identified hazards are assessed
- All hazards identified are eliminated where possible or where elimination of hazards is not possible, all risks are reduced to as low as reasonably practicable, using the hierarchy of controls
- All controls implemented to reduce and manage risks are continually monitored to ensure their ongoing effectiveness
- All people undertaking tasks that have associated hazards are informed of the hazard control measures to be implemented
- All people on site are adequately trained to their level of responsibility with regards to hazard identification and risk management
- All people on site (employees, contractors, and visitors) work according to the documented safe work procedures

In countries where English is not a common language, management has to ensure the requirements of this Standard are translated into local language and included in local procedures.

In general, responsible managers must ensure, by means of contractual requirements that contractors and sub-contractors working for HeidelbergCement, are responsible to ensure their employees comply with all the rules given below.

### Health & Safety Advisers

The H&S advisers support, coach, challenge, and work closely with managers. However, implementation of this Standard is the responsibility and accountability of line management.

Amongst others, they are responsible to

- Advise line managers and employees on the risk assessment methodology
- Provide training and assistance with the implementation and maintenance of the Standard
- Review operational compliance with this Standard on each site at least once every two years or more frequently as required by local laws or existing management systems
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### HeidelbergCement employees and contracted persons

Amongst others, they are responsible to

- Ensure all work performed by company employees, contractors, whether on company premises, travelling company business or off site (e.g. on customer's site) comply with the requirements of this Standard.
- Identify all hazards associated with the duties they will carry out, on-site and off-site, and to report any uncontrolled safety hazards they identify, prior to commencing their work, to their manager or supervisor

- Follow the Safe Work Procedures and using protective equipment as required by risk assessment
- Use the equipment and safety devices supplied or given to them in accordance with any training and instructions
- Ensure all activities they undertake do not impact on the health and safety of other people or the environment
- Take all reasonable steps necessary to ensure their own safety and the safety of other people while conducting their job tasks
- Contractors have to provide documented risk assessments for the work they will perform for HeidelbergCement and controls for mitigating the risks, prior to being authorized to work by a competent HeidelbergCement responsible person.

## 5 Definitions

Risk Assessment	A systematic and structured process whereby hazards present in a workplace, or arising from operational activity, are identified, risks evaluated, and control measures prioritized and put in place in order to reduce risks to acceptable levels.
Hazard	A condition in the workplace, equipment, or a method of carrying out an activity which has the potential to cause harm
Risk	The possibility that the potential hazard will harm you and/or another person and/or a property taking into account the probability and the severity
Probability	Likelihood that the particular hazard will result in harm or damage at this location
Severity	An estimation of how serious the potential problem might be in terms of harm to people and/or damage to property.
Frequency	Periodicity of the task/activity completion during which the hazards might have an impact
Reasonably practicable	As a general guide, reasonably practicable means that a person is deemed to have acted in a reasonably practicable way, if she/ he has taken into account: <ol style="list-style-type: none"> <li>a. the likelihood of the hazard resulting in injury or damage to property</li> <li>b. the degree of harm that might result from the hazard, if left uncontrolled</li> <li>c. what the concerned person knows, or ought to reasonably know, about the hazard or risk, and ways of eliminating or mitigating the risk;</li> <li>d. the availability and suitability of ways to eliminate or mitigate the risk; and</li> <li>e. after assessing the extent of the risk and the available ways of eliminating or mitigating the risk, the cost associated with available ways of eliminating or mitigating the risk, including whether the cost is grossly disproportionate to the risk.</li> </ol>
Competence	Combination of training, skills, experience and knowledge that a person has and the ability to apply them to perform a task safely. Other factors, such as attitude and physical ability, can also affect someone's competence.
Competent person	A competent person is capable of identifying existing and predictable hazards in the surroundings or working conditions, which are unsanitary, or dangerous to employees. The person is authorized to take prompt corrective measures to eliminate them.

## 6 Managing Health & Safety risks

Risk management is made up of several essential steps:

1. **Documenting the tasks** – finding out what tasks need to be done
2. **Identifying the hazards** – finding out what can cause harm at each stage of the task/ activity

3. **Assessing the risks** – understanding the nature of the harm that could be caused by the hazard, how serious the harm could be, the likelihood of it happening, and who could be harmed
4. **Controlling the risks** – implementing the most effective control measure that is reasonably practicable in the circumstances to prevent harm
5. **Re-assessing the hazards** – ensuring control measures are working as planned for controlling the risks and reassessing the hazards associated with tasks/activities after control measures have been implemented to reduce the risk.

This risk managing process is mandatory before conducting a task for the first time. It must be repeated/ revised/ updated at regular intervals and with proper documentation, at least every 3<sup>rd</sup> year, unless triggered by events given below or as specific Group Standards or local requirements requires. Responsible managers are accountable for ensuring that an up-to-date risk management process is established.

This process is triggered by:

- Planning of new or refurbishing of equipment
- Use of new tools, equipment, substances, etc.
- Change of work procedures, requirements, etc.
- Change of personnel or organization
- Relevant incidents, observations, etc.

In Appendix 1, a template is provided which should be used to document the hazards, the risk evaluation, the mitigating actions and the re-assessment of risks as explained below.

Companies already using a different approach to manage risks must ensure the methodology is suitable to identify and rate the risks to take appropriate actions.

## 6.1 Documenting the tasks

The first step in the risk management process is to list all the task/ activity steps involved in conducting the task. This is best done in logical/ chronological order so all aspects of the task are clearly defined, there are no gaps in the process and as such, no hazards remain unidentified.

When updating existing risk assessments the first step is to document the intended change to or implementation of new equipment, substances or procedures/processes.

## 6.2 Identifying the hazards

In this step, all hazards associated with tasks/ activities must be identified to the extent possible. It is necessary to understand what could cause harm or what the potential outcome of each task step could be for the people conducting the work, other people in the area (including the broader community) as well as the environment. It is paramount to use competent persons in this process.

It is important to check as well, the work environment (below, above, around, behind) to identify items, hazards and/ or situations that could result in harm when interacted with. These hazards are to be documented within the risk assessment.

See Appendix 3 for examples of common hazards.

## 6.3 Assessing the risks

Risk assessment is understanding:

- The nature of the harm that could be caused by the hazard
- The consequences of interactions with the hazard or potential situation could be
- The likelihood of it happening

The objective of this step is to determine the risk level for each risk detected, taking into consideration existing controls.

Following the identification of a hazard, the risks associated with each hazard must be assessed. This assessment is done by taking into consideration the most likely consequence that can be expected to occur to a person/ piece of plant or equipment as well as the likelihood of that consequence occurring when the hazard identified is present and/ or interacted with.

When rating risks, a practical approach must be taken when using the risk assessment matrix. The definitions of both severity of consequences and likelihood must continually be referred to, to obtain the most accurate assessment of risk possible. It is neither helpful to over assess nor under assess risks. Referring to these definitions regularly will assist in achieving accuracy.

Utilize local knowledge and competence, both within the site and across the company, as a sound check of accuracy to the history of events or incidents from the past. Such a review will assist greatly when considering both, the consequence that could occur when exposed to a hazard and the likelihood or probability of the outcome occurring.

The HeidelbergCement standard approach is using a Risk Assessment Matrix to determine the level of risk, considering the potential severity of an incident and the probability of its occurrence. An example is provided in Appendix 2 of this document. HeidelbergCement companies may use different factors in calculating the risks, which is acceptable as long as increasing risks are always indicated by increasing values.

#### **6.4 Controlling the risks**

Implement the most effective actions/ control measures according to the hierarchy of controls that is reasonably practicable in the given circumstances.

Once the level of a risk has been determined using the risk matrix, actions must be implemented to eliminate or mitigate the risk to an acceptable level (see chapter 10).

Actions listed on risk assessments, in order to control all identified hazards, are to be developed in consideration of the hierarchy of controls. Thought must be given to whether the hazard can be eliminated as a first option and if not, the lower levels of the hierarchy must be considered in descending order.

Due to the nature and the potential severe consequence(s) of an unsatisfactory control, extreme and high risks identified, must be managed as a priority ahead of moderate and low risks. This is due to the fact, that once an extreme risk has been managed, the residual risk may potentially lead to a low, moderate or high risk being created which must also be controlled.

Once the correct level of control has been determined, the control/s must be implemented before the hazard is interacted with.

#### **6.5 Re-assessing the hazards**

Once a hazard is identified, the risk has been both assessed and controlled, a review of the residual risk must be undertaken to ensure that the risk remains in a suitably controlled state.

This review can be done:

- By physical observations and discussions with the people who work in the area effected by the hazard
- When further information is received from safety alerts, incident reports, inspections, safety conversations, etc.
- By a documented review of risk assessments, which has to be done at least every 3rd year, if not required otherwise.

### **7 H&S Risk assessment types**

Risk assessments, in general, come in three variants or a combination of all three. Written risk assessment for either routine or non-routine tasks and “dynamic” risk assessments.

### 7.1 Risk assessment of routine tasks

A task specific risk assessment must be performed for all routine activities that have known hazards with likelihood to harm people and/ or property, if done incorrectly. It results in agreed and documented safe work procedures. Those must be followed each time the task is performed.

Prior to a task being performed, all persons involved must ensure that they are familiar with the content of the safe work procedures. This can be achieved by regular training in the process or by re-familiarizing themselves with the content of the safe work procedures. In both cases this needs to be documented by appropriate means. Furthermore, a dynamic risk assessment by individual workers might be required (see 7.3).

All risk assessments must be documented and archived in a risk inventory.

### 7.2 Risk assessment of non-routine tasks

The safety aspects of any non-routine task must be analyzed to ensure that the hazards associated with the task are identified and controlled.

Suitably trained and competent persons must perform the risk assessment of non-routine tasks to ensure that the quality of information is adequate to manage potential exposure to hazards

It must be developed when:

- A non-routine task is about to be conducted
- Performing a task for the first time
- Performing a one off task of medium or greater risk
- A safe work procedure is in place however there is significant change identified (either prior to work commencing or during work)
- Where legislation requires a risk assessment to be completed on every occasion

Non-routine risk assessments are following the same steps as routine risk assessments. They are often hand written out on the job on appropriate templates. For examples see UNITE<sup>2</sup>.

Typical examples for such non-routine assessments are the so-called 'Job-safety analysis' (JSA) or 'Safe Job Analysis' (SJA).

### 7.3 Dynamic Risk assessment

A dynamic risk assessment is a personal risk assessment conducted by an individual worker. Examples are e.g. 'Stop Card', 'Take one', 'Take five', 'LMRA' (last minute risk assessment) (see footnote 2 for examples). It must be done before starting any task, if this task is not already covered by another specific risk assessment (work permit, safe job analysis,...). A standard checklist should support this process.

Where a written risk assessment and documented safe working procedure already exist, the dynamic risk assessment will allow the worker(s) to consider if the circumstances or environment, they are about to work in, are assessed in the risk assessment with all control measures in place or have changed and need re-assessing.

Dynamic Risk Assessment must only be used for tasks already covered by safe work procedures. It shall not be used for any non-routine tasks as a replacement for a thorough risk assessment.

### 7.4 Risk assessment – 'site' (Site risk register)

Some countries have the legal requirement to produce a 'site' risk assessment for each site or premises, identifying all the known hazards on that 'site' and the preventative and protective control measures put in place to mitigate the risks.

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<sup>2</sup> Good practice examples: [http://unite.grouphc.net/wok/hs/Pages/Good%20practices\\_en-US.aspx](http://unite.grouphc.net/wok/hs/Pages/Good%20practices_en-US.aspx)



Where this requirement exists, there is normally instruction and guidance for completing the 'site' risk assessment, which should be followed.

For any additional support or guidance, the safety department must be consulted.

## 8 Documentation

### 8.1 Templates

H&S risk assessments and safe work procedures for routine tasks must be documented in writing and stored electronically. Countries must provide standardized templates for the documentation. Examples are provided on UNITE (see footnote 2).

### 8.2 H&S risk inventory

The H&S risk inventory is an important component of the overall risk management framework. It documents the identified, assessed, and managed risks to acceptable levels through a review and updating process. It records the details of all risks that have been identified along with their analysis and plans for how those risks will be treated.

The inventory is used as a tool to define what activities on site require a safe work procedure and what the minimum controls for specific hazards on site are.

### 8.3 Information packages

Site management has to inform workers about the outcome of the risk assessments:

- The resulting mitigation measures
- The remaining hazards, they will be exposed to
- Any additional controls in place for mitigating the risks

Contractors and visitors must also be informed about the above, where it applies to them.

It is good practice to store/ display documents related to a task on or near the work area. The documents must be protected against dust and moisture and be readily available for workers to access and review.

Such information packages should be used for all high risk routine tasks that require the use of a permit. It can also be utilized for any other tasks that are undertaken where the workers or supervisors feel it necessary.

It might contain, but is not limited to:

- Hazard description and safe work procedures (often use of pictograms)
- Relevant permit templates
- Rescue plans
- Equipment check lists
- Dynamic risk assessment forms
- And any other relevant documents related to the task

## 9 Persons involved in the process

H&S Risk assessments must involve the workers who could possibly be directly affected by the addition or omission of hazard controls.

Consultation with workers is required at each step of the risk management process. By drawing on the experience, knowledge and ideas from workers who perform or will perform the task, you are more likely to identify all hazards and choose effective control measures.

Risk assessments must be developed and/ or reviewed by a suitably qualified and competent person. In signing off a risk assessment, this person(s) is thereby

- Accepting that the data contained within the document is accurate to the best of their knowledge

- Stating that the work may go ahead as per the documented task steps.

Normally this will be someone in a managerial position, or someone delegated the task.

Contractors may either present a risk assessment that they have developed themselves for the work that they will undertake, or be involved in the development of a HeidelbergCement company risk assessment. Both situations will require review by a suitably trained HeidelbergCement company representative prior to any work commencing.

## 10 Hierarchy of hazard control (mitigating the risk)

Risks must be eliminated or mitigated to the lowest reasonably practicable level by taking preventative measures, in order of priority.

The hierarchy below sets out an ideal order to follow when planning to reduce risk from activities. Control measures are not mutually exclusive. There may be circumstances where more than one control measure is used to mitigate exposure to hazards.

1. Elimination → Redesign the task or substitute a substance so that the hazard is removed or eliminated.
2. Substitution → Replace the material or process with a less hazardous one. Care must be taken to ensure the alternative is safer than the original.
3. Isolate → Isolate the hazard or separate the hazard or hazardous work practice from people involved in the work or people in the general work areas from the hazard. This could be done by installing screens or barriers; or marking off hazardous areas;
4. Engineering controls → Modifying tools or equipment, automating a process, providing guarding to machinery or equipment or any other engineering measure that is practicable to implement. Give priority to measures, which protect collectively over individual measures.
5. Administrative controls → Implementing safe work procedures to be followed with the corresponding training. This could include limiting the time a person is exposed to a particular hazard.
6. Personal protective equipment (PPE) → Only if other measures have been tried and found ineffective in controlling risks to a reasonably practicable level, personal protective equipment (PPE) must be used as a control measure.
  - PPE controls must always be accompanied by an administrative control which informs the involved persons of what PPE is required, how it is to be used, the protection it will provide, how it is to be stored, cleaned and cared for.

## 11 Competencies

The responsible local line manager has to ensure that personnel carrying out H&S risk assessments (risk assessors) are competent in the task and authorized to do so. This may require regular refresher trainings for the competent person(s).

Other personnel/ team members involved in the development of a risk assessment may also be competent persons, but this is not a requirement when assisting the risk assessor(s).

If the hazard to be risk assessed requires specialist skills (e.g. such as dealing with complex electrical circuitry or handling asbestos, etc.), the responsible line manager must ensure a person with the necessary skills and training assists with the risk assessment.

Personnel requested to conduct dynamic risk assessments must be trained in the technique and use of the local forms.

All operational employees of HeidelbergCement must be trained in the technique of risk assessment to be able to conduct the dynamic risk assessments.

## 12 Implementation process and control

A gap analysis against the requirements of this document must be performed within 3 months after publication of this document but end of 2019 at the latest.

Countries with existing risk management procedures have to arrange necessary changes within 6 months after publication of this document, latest by end of June 2020.

Countries that do not have a risk management procedure have 12 months to establish the requirements of this guideline, after publication of this document, latest end of 2020.

The implementation of this Standard has to be checked in the future through appropriate measures, such as H&S Management system audits.

### **13 Further applicable documents and additional information**

Further applicable documents are the Group H&S Policy and applicable Group H&S Standards. These documents and additional information (e.g. training material, good practice examples) are provided at the Group H&S homepage: <http://unite.grouphc.net/wok/hs/Pages/default.aspx>

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Appendix 1 – Documentation template for risk assessment

safe work healthy life		Risk Assessment Form			HEIDELBERGCEMENT			
		Insert your company logo						
Task / Process		RA Number						
		Version Number						
Business line		Frequency of Task or Process						
Site		Number of people affected						
Department		At risk groups						
Exact Location		Name(s) of Assessor(s)						
Equipment Name		Date Assessed						
Equipment No		Review by date						
				Risk		Residual Risk		
Hazardous Element	Potential Effect of the Hazard (consider Quality / H&S / Environmental impacts)	Existing Controls	Risk			Additional Controls Required		
			Probability	Severity	Risk	Probability	Severity	Risk



Template Risk Assessment Form.xls:

Appendix 2 – Risk matrix

This is an example currently used by Hanson UK. Similar matrixes of other internal and external companies can be used as well and have slightly different classifications and weightings

		H&S impacts					
SEVERITY	Fatality	10	0	10	20	40	60
	Disability or LTI > 1 month	7	0	7	14	28	42
	Lost time injury	4	0	4	8	16	24
	Medical treatment case	2	0	2	4	8	12
	No or minor injury (FA)	1	0	1	2	4	6
Risk = severity x probability			0	1	2	4	6
			Zero Harm	Extremely unlikely	Unlikely	Possible	Likely
		PROBABILITY					

Risk color code:

Zero harm	0	Proceed
Amber risk	1 -4:	Proceed with caution
	5 -11:	If further reasonably practicable controls are identified these should be implemented. If no further reasonably practicable controls are identified record this on the form and the work can proceed with caution
Red risk	12-60:	Reassess and identify further controls

## Probability

Zero Harm	Only in exceptional circumstances, practically impossible	100+ year event
Extremely unlikely	May occur/ improbable	10 to 100 year event
Unlikely	Could occur infrequently	1 to 10 year event
Possible	Might occur in some circumstances	Multiply occurrences within a year
Likely	Is expected to occur in most circumstances/ common or repeating occurrence	Multiple occurrences within a month

## Appendix 3 – Potential hazards (non-exhaustive)

Hazard	Potential Harm
Manual tasks	Overexertion or repetitive movement can cause muscular strain
Gravity	Falling objects, falls from height, slip and trips of people can cause fractures, bruises, lacerations, dislocations, concussion, permanent injuries or death
Electricity	Potential ignition source. Exposure to live electrical wires can cause shock, burns or death from electrocution
Machinery and equipment	Being hit by moving vehicles, or being caught by moving parts of machinery can cause fractures, bruises, lacerations, dislocations, permanent injuries or death
Hazardous chemicals	Chemicals (such as acids, hydrocarbons, heavy metals) and dusts (such as asbestos and silica) can cause respiratory illness, cancers or dermatitis
Extreme temperatures	Heat can cause burns, heat stroke or fatigue Cold can cause hypothermia or frost bit
Noise	Exposure to loud noise can cause permanent hearing damage
Radiation	Ultra violet, welding arc flashes, micro waves and lasers can cause burns, cancer or blindness
Biological	Micro-organisms can cause hepatitis, legionnaires' disease, Q fever, HIV/Aids or allergies
Psychosocial hazards	Effects of work-related stress, bullying, violence and work-related fatigue
Gas	Poisonous gases and/ or lack of oxygen