

# **dB-Zero Limited**

## **Health & Safety Manual**



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## **Employee Health & Safety Handbook**

This handbook has been prepared to provide you with information about our health and safety policy, procedures and arrangements. It also includes information about your duties as an employee and will help you to understand Health and Safety issues which affect you at work.

### **What the Law Requires**

As an employer we must prepare a written Health and Safety Policy statement explaining how we intend to protect the health and safety at work of our employees and anyone else who might be affected by our work activities. Our Health and Safety Policy and Arrangements reflect our commitment to the provision of a safe working environment. They also meet a requirement to identify the duties and responsibilities for employees with responsibilities for managing health and safety in our workplace.

We also have a responsibility and duty to ensure that you are:

- aware of and understand the Health and Safety General Policy.
- aware of and understand the health and safety rules relating to your work.
- provided with adequate information, instruction, training and supervision.
- made aware of the significant risks associated with your work activities and how they may affect others.
- provided with Safe Systems of Work.
- provided with a safe and healthy working environment.

The policy is reviewed at regular intervals.

We ask you to acknowledge that you have read and understood the rules set out in this manual, that you will obey them and any other rules or changes that are drawn to your attention. We will also provide, as appropriate, additional documents, training and instruction to help you to carry out your work safely and without risk to your health.



## Health and Safety General Policy Statement

**dB- Zero** recognizes that it has responsibilities for the health and safety of our workforce whilst at work and others who could be affected by our work activities. We will assess the hazards and risks faced by our workforce in the course of their work and take action to control those risks to an acceptable, tolerable level.

Our Managers and Supervisors are made aware of their responsibilities and required to take all reasonable precautions to ensure the safety, health and welfare of our workforce and anyone else likely to be affected by the operation of our business.

This business intends meeting its legal obligations by providing and maintaining a safe and healthy working environment so far as is reasonably practicable. This will be achieved through;

- providing leadership and adequate control of identified health and safety risks;
- consulting with our employees on matters affecting their health and safety;
- providing and maintaining safe machinery, tools and equipment;
- ensuring the safe handling and use of substances;
- providing information, instruction, training where necessary for our workforce;
- ensuring that all workers are competent to do their work, and giving them appropriate training;
- preventing accidents and cases of work related ill health;
- actively managing and supervising health and safety at work;
- having access to competent advice;
- aiming for continuous improvement in our health and safety performance and management through regular (at least annual) review and revision of this policy; and the provision of the resource required to make this policy and our health and safety arrangements effective

We also recognize;

- our duty to co-operate and work with other employers when we work at premises or sites under their control to ensure the continued health and safety of all those at work; and our duty to co-operate and work with other employers and their workers, when their workers come onto our premises or sites to do work for us, to ensure the health and safety of everyone at work.



# KEY HEALTH AND SAFETY RESPONSIBILITIES

## Introduction

Health and safety legislation places specific duties on employers to make arrangements to protect the health, safety and welfare of their employees whilst at work and anyone else (visitors, contractors, etc) who might be affected by their business activity.

To help us comply with these duties we have assigned specific health and safety responsibilities to Key Personnel

In addition, we have a Health and Safety Management System that includes:

- our Health and Safety Policy.
- safety responsibilities for key personnel.
- safety arrangements to deal with health and safety issues in our workplace.
- risk assessments.
- procedures to deal with emergencies.
- employee safety rules.
- additional information such as documented Safe Systems of Work,
- specific safety rules and fire precautions, are also provided.
- Other health and safety information provided to employees includes:
  - the official Health and Safety Law poster.
  - a current Employer's Liability Insurance Certificate.
  - health and safety booklets and information sheets.
  - information about significant findings from risk assessments and action to be taken.
  - information relating to Safe Systems of Work and work procedures.

## EMPLOYEES' LEGAL RESPONSIBILITIES

**All employees have a legal duty to take reasonable care for themselves and others and to co-operate with management on all aspects of health and safety.**

**You must co-operate with and follow all emergency arrangements.**

**You must ensure that you report all accidents, near misses or damage to equipment and property as soon as possible. You must co-operate and assist with accident or incident investigations when asked.**

**You must refrain from deliberate acts or interference with anything provided in the interests of health, safety and welfare. This includes alteration, removal or deliberate disablement of guards and other safety devices and unauthorized alteration or repair of equipment.**

**You must carry out your tasks in a safe manner and follow any instructions, procedures or Safe Systems of Work given to you by managers and supervisors. If you identify a hazard or hazardous situation, you must immediately, or as soon as possible report, it to the person managing the work.**

**You also have a duty to ensure that all personal protective equipment provided for you is worn as directed, kept clean, maintained and stored in the correct manner.**



Remember that these are statutory duties. The Enforcing Authorities can prosecute individual employees who fail to comply. Prosecution can result in heavy penalties - fines and or imprisonment.

## **Working Practices**

You must not operate any equipment or use hazardous substances unless you have been trained and authorized to do so.

You must use all work equipment in accordance with your training and instructions.

You must report any fault, damage, defect or malfunction in any equipment to management immediately or, if this is not possible, as soon as reasonably practicable.

You must not make repairs to any work equipment unless you have been trained and authorized to do so.

When cleaning work equipment and work station you must use the correct procedure as instructed.

Work equipment must not be left switched on without someone in control of it.

Employees not trained yet must not operate (unless under direct supervision) or clean certain dangerous machinery or tool.

You must use all hazardous substances in accordance with written assessments and instructions.

All hazardous, flammable or explosive substances that are not in use must be stored correctly in their designated safe storage areas.

You must follow safe working procedures and any training/ instructions given on handling laser, fiber optic off-cuts.

You must carry out manual handling tasks as instructed.

You must comply with all safe working procedures as detailed by the organization.

You must wear suitable protective gears at all times at your workplace.

## **Working Conditions and Working Environment**

You must use the correct tools provided at work.

You must clear up any spillage within the work area as soon as possible and report any hazardous conditions that exist.

Waste hazardous substances must be disposed of in a safe and approved manner.

Do not allow hazardous substances to enter drains or sewers.

You must keep all areas clean and tidy.

You must dispose of all rubbish and waste materials as instructed.

You must report any hazardous conditions to management.

## **Fire Precautions**

You must report any use of fire fighting equipment to management.

Do not attempt to fight fires unless you have been trained how to do so.

You must comply with all established emergency procedures.

You must not obstruct any fire escape route, fire equipment or fire doors at any time. Locked or obstructed fire escape routes must be reported immediately to management.

You must not interfere with or misuse any fire equipment provided.

Fire doors should be kept closed at all times, unless fitted with an automatic release device.

## **Hazard Warning Signs, Signals and Notices**

You must comply with all workplace warning signs, signals and notices displayed.



## **Protective Clothing and Equipment**

You are required to use all personal protective equipment as instructed.

You must not damage or misuse personal protective equipment.

Personal protective equipment must be stored correctly.

You must inform management of any personal protective equipment defects or loss.

## **Gross Misconduct**

You will be liable to summary dismissal if you are found to have acted in either of the following ways:

- Serious breaches of the preceding health and safety rules, which endanger the lives of or may cause serious injury to employees or any other person.
- Interference with or misuse of any equipment for use at work, such that it may cause harm.

## **HAZARD REPORTING**

If you have concerns about health or safety hazards in the workplace you should raise them with your supervisor or manager so that they do not go unnoticed and remedial action can be taken.

Recognizing that some people can feel uncomfortable about raising hazard issues we also have a system which allows you to report your concerns in writing and (should you choose) anonymously.

Complete the Hazard Log form at the back of this handbook, put it in an envelope and place it in the mail box.

Should you need additional Hazard Log forms or would rather not use the one in this booklet you can get additional copies by asking your line manager.

We encourage your participation in reporting hazards, so that defects or hazards can be quickly identified and remedied before they can cause injury or ill-health to you or your colleagues.

## **RISK ASSESSMENTS**

We carry out the process of risk assessment to reduce the risk of injury and ill health, and identify:

- the significant hazards that employees may be exposed to.
- who could be harmed and how.
- Identifying existing control measures.
- the likelihood of someone being harmed by the hazard.
- what (if any) further actions are required.
- appropriate Safe Systems of Work and necessary training.

For further information on risk assessment and to view those relevant to your work you should speak to your supervisor or manager.

## **FIBER SAFETY RULES**

This section outlines some of the general health and safety rules that apply while working with fiber. There may be other more specific procedures where particular working practices apply and for which training and instruction will be provided.

### **Cable Handling**

All optical fibers cables are sensitive to damage during handling & installation. Handle the cable as per guidelines given below. Some of the important parameters that need to be given special attention during cable installation are:



### **IMPORTANT: Cable Bending Radius**

Optical fiber cables are designed with particular minimum bending radius. The cable should never be bent below minimum bending radius at any location. Doing so can result in higher bending losses and/or internal breaks in the fiber. Generally the bending radius of a cable is greater than 20D, where D is the diameter of cable.

Exceeding the minimum bending radius of the cable can cause damage to the fibers, which cannot be seen from outer surface of the cable. This can also lead to expensive restoration of cables at later dates.



### **IMPORTANT: Cable Bending Radius**

Optical fiber cables are designed for particular pulling tension and tensile strength. Exceeding the Cable Pulling Tension above the specified value in the Cable Data sheet / Specification, can alter cable's other characteristics.

Do not pull the cable above specified pulling tension. Use pulling grips with swivel to attach to the pull rope, lubricants compatible with cable jacket and duct material to achieve maximum pulling distance



### **IMPORTANT: Cable Twisting**

Optical fiber cables are designed for particular twisting/torsion. Exceeding the cable twisting greatly increase the probability of fiber damage. This is recommended to use anti twisting device during cable pulling.

## **Laser Precaution**

Laser beam used in optical communication is invisible and can seriously damage the eyes. Viewing it directly does not cause any pain and the iris of Eye does not close automatically as it does while viewing the bright light. This can cause serious damage to the retina of eye.

Therefore:

- Never look into a fiber having a laser coupled to it.
- If eye is accidentally exposed to LASER beam, immediately rush for medical assistance.

## **Optical Fiber Handling Precaution**

The broken ends of fibers created during termination and splicing can be dangerous. The ends are extremely sharp and can easily penetrate the skin. They invariably break off and are very hard to find and remove. Sometimes pair of tweezers and magnifying glass is needed to take them out. And any delay in taking the fiber out of body could lead to infection, which is dangerous.

Hence

- Be careful while handling the fibers.
- Do not stick the broken ends of fiber into your fingers.



- Do not drop fiber pieces on the floor where they will stick in carpets or shoes and be carried elsewhere like home. Dispose all scraps properly.
- Do not eat or drink near the installation area

### Material Safety

Fiber optic splicing and termination processes require various chemical cleaners and adhesives. The safety instructions defined for these substances should also be followed. If there is confusion in usage of these products, ask the manufacturer for a MSDS (Material Safety Data Sheet). Remember the following instructions while working with materials.

- Always work in well-ventilated areas.
- Avoid skin contact to materials involved as much as possible.
- Avoid using chemicals that cause allergic reactions.

Even simple isopropyl alcohol, used as a cleaner is flammable and should be handled appropriately.

Hexane			Iso-Propanol	
Type of Exposure	Effect of exposure	Emergency Treatment	Effect of exposure	Emergency Treatment
<b>Inhalation</b>	Irritation of respiratory tract, cough	Maintain Respiration, Bed rest.	Irritation of upper respiratory tract	Remove victim to fresh air area, Administer artificial respiration if breathing is regular
<b>Ingestion</b>	Nausea, Vomiting, Headache	Do not induce vomiting, immediately seek, medical advice.	Drunkenness & vomiting	Have a victim drink water and milk, seek medical aid
<b>Contact with skin</b>	Irritation	Wipe off affected area of skin & wash with soap & water	Harmless to skin	Wipe off affected area of skin & wash with soap & water
<b>Contact with eyes</b>	Irritation	Wash eyes with plenty of water for 15 min.	Irritation	Wash eyes with plenty of water for 15 min

### Fire Safety

- The fusion splices use an electric spark to make splice, so ensure that there are no flammable gases in the space where fusion splicing is done.
- Splicing should never be done in places manholes where gases can accumulate.
- The cables are brought up to the surface into a splicing trailer where all fiber work is done. So the splicing trailer is temperature-controlled and kept spotlessly clean to ensure good splicing.
- Smoking should not be allowed around fiber optic work. The ashes from smoking can contribute to the dust problems in fibers, apart from the danger of explosion posed by them due to presence of combustible substances.

### Working Safety:

- To minimize the risks of an accident in the work area follow specified rules for setting up barricades, manhole guards and warning signs.





- Before pulling cable directly from the Figure 8 shape, make sure that the area inside the loop of the cable is clear of personnel and equipment. Failure to do so may result in injury to personnel or damage to the cable due to entanglement.

**Ensure that the tools and equipment used for cable installation are in proper condition. Corrosion of equipment may damage cable or cause injury to personnel.**

- Take care of electric hazards, if electrical lines are passing through the manholes or vaults where installation is being done.

## **Safety During Duct Installation:**

### **Manhole/ Underground Vault Safety**

- Explosive gas and vapour might be present in manholes due to leaking of nearby gas or liquid pipelines. Before entering any manhole, test the manhole atmosphere with an approved test kit for any flammable and poisonous gas.
- Avoid usage of any device that produces spark or flame in the manhole.
- Wear rubber gloves when working near exposed electrical circuits to avoid electric shock
- Follow electrical safety rules when working near power lines.

## **Safety During Aerial Installation:**

### **Pole Safety**

- Before climbing a pole, inspect it for various safety issue like, splintering, insect nests and sharp protrusions.
- Use leather gloves when climbing or getting down on a pole and when working with sharp instruments or materials.

## **Cable Pulling Safety**

- Personnel normally should stay away from the area where a cable is being pulled around a piece of stationary hardware under tension. Appropriate safety measures should be taken while working near the installation site.
- Keep hands free from tools when climbing or getting down a pole or ladder.
- Suitable accessories must be used during installation to ensure smooth and safe working.
- Only essential skilled personnel should stay near the installation site during tensioning operations can minimize risk of injury or death. Nobody should allow climbing on intermediate poles, while tensioning. Passerby on ground should be kept away from poles during tensioning. Suitable warning/ Safety display board should be put on installation site.
- Ground every metallic component to avoid electric hazard due to electric spark produced by power lines or any other means

## **Safety Summary**

- Keep all foods and beverages out of the work area. If fiber particles are ingested, they can cause internal hemorrhage.
- Wear disposable aprons to minimize fiber particles on your clothing. Fiber particles on your clothing can later get in to your food, drinks and/ or be ingested by other means.
- Always wear safety glasses with side shields, suitable safety Helmets, Safety belts and protective gloves. Handle the fiber optics splinters similar to glass splinters.
- Never look directly through the end of fiber cables till you ensure that there is no light source at the other end. Use a fiber optic power meter to make sure that fiber is dark. When using an optical tracer or continuity checker.
- Look at the fiber from an angle at least 6 inches away from your eye to determine if the visible light is present.
- Only work in well- ventilated areas.
- Do not touch your eyes while working with fiber optics systems until they have been thoroughly washed.
- Keep all combustible materials away from the curing ovens.
- Dispose the fiber scraps properly. Thoroughly clean your work area after completion of installation.
- Do not smoke while working with fiber optic systems.



**HAZARD REPORTING FORM**

**Form HR**

Use this form to report workplace hazards unsafe working conditions or practices that you are not able to correct for yourself or are not within your area of responsibility.

If you have a suggested solution or remedy please let us know about it.

The business would prefer that you hand this completed form to a line manager so that the issues can be explained to them but you do not have to do that. You can simply leave it in the mail box.

If you need additional copies of this form or would rather not use the one from this booklet you can get additional copies by asking your line manager.

If you wish to remain anonymous there is no need to give your name. All hazards reported, including anonymous reports, will be taken seriously.

Report date: .....

Hazard location: .....

Hazard description: .....

Suggested solution: .....

What is your name? .....  
(not compulsory)

.....

For employer's use

Action identified as necessary:

Action allocated to: .....

Target date for completion: .....

Employers should copy basic details of this hazard report to form HL, Hazard Log, which will act as a running record and give an oversight of all hazards reported.



**dB- Zero Limited**

**EMPLOYEE CONFIRMATION OF RECEIPT AND CONTENT OF EMPLOYEE SAFETY HANDBOOK**

*Please read the notes below, then sign and date this form*

**Part 1**

dB-Zero has prepared a Health and Safety Policy. This form is to let you know that the sections of the Policy affecting you, as an employee, are contained in the Employee Safety Handbook.

Should you wish to see the complete Health and Safety Policy this can be arranged; ask your line manager. They will arrange for it to be made available.

Please read the Employee Safety Handbook and take time to understand it.

Raise any questions about the content with your manager. Then sign and read the declaration at Part 2.

**Part 2**

I have read the Employee Safety Handbook. I understand, accept and will comply with the contents. I understand that compliance with the rules and conditions set out forms part of my contract of employment. I will keep myself aware of its contents and any updates I am told about.

Employee signature: .....

Date: .....

Name: .....

Department: .....

**Note:** By law employers have to make available to employees relevant information about their health and safety policies, procedures and safe working systems. The same legislation requires employees to follow safety rules, procedures and instructions set by their employer and should confirm that they understand these matters. In the event of refusal to sign this document, arrangements will be made to have the contents read to you and this will be recorded by your manager.

