



# Dubai Municipality Health and Safety Department



## Technical Guidelines for Safety Signs at Work

DM-HSD-GU99-SSW2

 GOVERNMENT OF DUBAI	Organization Unit:	Health & Safety Department	الوحدة التنظيمية:	 بلدية دبي DUBAI MUNICIPALITY
	Document title:	Technical Guidelines for Safety Signs at Work	عنوان الوثيقة:	
	Doc Ref.	DM-HSD-GU99-SSW2	رقم الوثيقة:	

## CONTENTS

1.	INTRODUCTION	3
2.	PURPOSE	3
3.	SCOPE	4
4.	DEFINITION	4
5.	GUIDELINES	5
A.	Hazard Identification and Risk Assessment	5
B.	Safe Systems of Work	6
C.	Components of Safety Signboard	6
D.	Safety Symbol Requirements	8
E.	General Requirements on Using Safety Signs	9
F.	Safety Signboard Location, Size, and Style Requirements	10
G.	Safety Signboard Material Requirements	11
H.	Acoustic Signals and Illuminated Signs Requirements	12
I.	Using Signs on Containers and Pipes	13
J.	Using Signs for Dangerous Goods Storage Areas	14
K.	Using Signs to Mark Workplace Obstacles, Dangerous Locations, and Access Routes	14
L.	Fire Safety Signs	14
M.	Maintenance	14
N.	Information, Instruction and Training	15
6.	REFERENCES	15
ANNEX A	SAMPLE CHECKLIST FOR SAFETY SIGNS AT WORK	16
ANNEX B	GUIDANCE FOR MAKING SAFETY SIGNBOARD	17
ANNEX C	EN ISO 7010 SAFETY SYMBOLS	20
ANNEX D	SAFETY SIGN SAFE VIEWING DISTANCE AND TEXT SIZE GUIDANCE	27

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b>	<b>Health &amp; Safety Department</b>	<b>الوحدة التنظيمية:</b>	 بلدية دبي DUBAI MUNICIPALITY
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>	
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>	

## 1. INTRODUCTION

Dubai Municipality (DM) being one of the model civic bodies in the world, puts premium emphasis on safeguarding the health and safety of all people working in the Emirate of Dubai through the development and implementation of OHS regulations, guideline documents, awareness programs, certification schemes, etc. to further improve the OHS standard in place.

However, the above governance measures will not be effective if the companies/establishments operating in the Emirate of Dubai are not properly implementing safe systems of work, and are not promoting and instilling safety culture to the employees under their management.

Thus, to help and guide the employers in effectively communicating safety and to promote workplace safety culture within their organization, DM Health and Safety Department has developed this technical guideline on safety signs at work so that employees are provided with the awareness of potential hazards and how to avoid them.

Effective communication is a challenge especially in the Emirate of Dubai as this is the melting pot of many nationalities having different languages. Thus, in order to overcome this challenge, this guidance document adopts the use of the new ANSI Z535 standard as this offers the following advantages:


- Hazards are known due to use of internationally registered graphical symbols that are easily understood;
- Hazards consequence and avoidance are known as signboard contains concise and clear message on the probable consequence of not avoiding or disregarding the hazard; and how to avoid the hazard.

Employers must put every effort to eliminate and minimize occupational hazards since the use of safety signs are not to be considered as a primary hazard control measure but should be used in conjunction with sound safe systems of work and applicable risk control measures (e.g. engineering controls, proper work methods, safety instructions, etc.).

## 2. PURPOSE

This technical guideline has been prepared to provide the necessary guidance for employers, health and safety practitioners and other persons who have responsibility for the control of workplaces and premises to effectively communicate safety through safety signs by providing awareness to people of potential hazards and how to avoid them; provide information on the location of emergency equipment, direct people towards emergency exits and assembly points and other information on health and safety.

Issue date: 04.10.2021	OPEN DATA / بيانات مفتوحة	V 2.0
Superseded Issue Date: 23.07.2020		Page 3 of 28

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>

### 3. SCOPE

This technical guideline, shall apply to all workplaces such as commercial and industrial establishments, public or government institutions, including construction-related project sites in the Emirate of Dubai.

This document provides general requirements on the proper selection, use, location, etc. of safety signs at work including technical requirements (e.g. shape, color, content, etc.). This technical guideline does not cover signs related on fire and life safety; and transport of materials as these are covered in other legislations/requirements (e.g. UAE Civil Defense, RTA, etc.)

### 4. DEFINITION

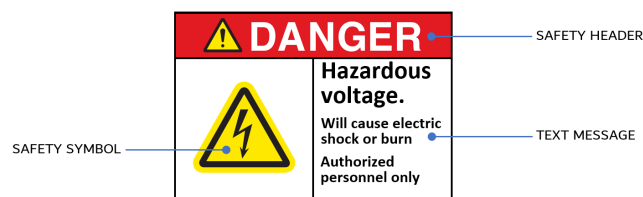
Unless the context otherwise requires, the following terms shall be deemed to mean the definitions hereby assigned to them.

#### Safety sign

A sign providing information or instruction about occupational health and safety by means of a signboard, a color, an illuminated sign, acoustic signal or verbal communication.

#### Safety signboard

A sign which provides information or instructions which generally contains safety alert symbol; signal words (e.g. danger, warning, caution, notice, safety instructions); symbols/pictograms; and clear and concise text messages. Refer to Section 5C and figure below.





#### Safety symbol color

A color to which a specific meaning is assigned (e.g. yellow means “warn of hazard or danger”, “take precaution”, or “be careful”). Refer to Section 5D.

#### Symbol or pictogram

Graphical symbols used to bridge language barriers and draw attention to the safety message. These are used on a signboard or illuminated sign. Refer to Annex C (ISO 7010 graphical symbols).

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>	 بلدية دبي DUBAI MUNICIPALITY
	<b>Document title:</b>	Technical Guidelines for Safety Signs at Work	<b>عنوان الوثيقة:</b>	
	<b>Doc Ref.</b>	DM-HSD-GU99-SSW2	<b>رقم الوثيقة:</b>	

### **Illuminated sign**

A sign made of transparent or translucent materials which is illuminated from the inside or the rear to give the appearance of a luminous surface (e.g. emergency exit signs).

### **Acoustic signal**

A sound signal which is transmitted without the use of a human or artificial voice (e.g. equipment alarm, emergency siren).

### **Safe Viewing Distance**

Refers to the closest distance a person can be to the safety sign wherein it will give enough time for the person to follow the message conveyed by the safety sign to avoid the hazard.

### **Referent**

Idea or object that a graphical symbol is intended to represent.

### **Workplace**

Any physical location wherein a person performs work related activities under the control of the organization.


## **5. GUIDELINES**

### **A. Hazard Identification and Risk Assessment**

To determine whether to use safety signs, the employer shall ensure to taken into account the results of hazard identification and risk assessment which includes control measures that needs to be undertaken. If the control measures (e.g. engineering, isolation, substitution, etc.) does not eliminate the hazards and there is still a significant residual risk, then appropriate safety signs shall be used as an additional measure to help in further reducing the residual risk by warning the employees of any remaining significant risk and/or to provide instructions on measures to be undertaken in relation to these risks. For example, in some workplaces wherein there is a significant risk of developing a respiratory illness despite implementation of control measures, the use of safety signs on wearing respiratory protection equipment is required.

Hazard identification and Risk Assessment shall be conducted by a competent person(s) and appropriate knowledge of the work activity.

Issue date: 04.10.2021	OPEN DATA / بيانات مفتوحة	V 2.0
Superseded Issue Date: 23.07.2020		Page 5 of 28

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>

## B. Safe Systems of Work

Employers are required to implement safe systems of work in every workplace which includes information, training, instruction and supervision. Safe systems of work must be properly communicated to all stakeholders detailing potential hazards, duties and responsibilities, procedures and guidelines. Ensure that workers are properly trained in the meaning of posted safety signs and the necessary control measures that needs to be followed in connection with the safety signs.

Safety management systems shall be properly reviewed and revised to assess effectiveness and suitability of all existing control measures.

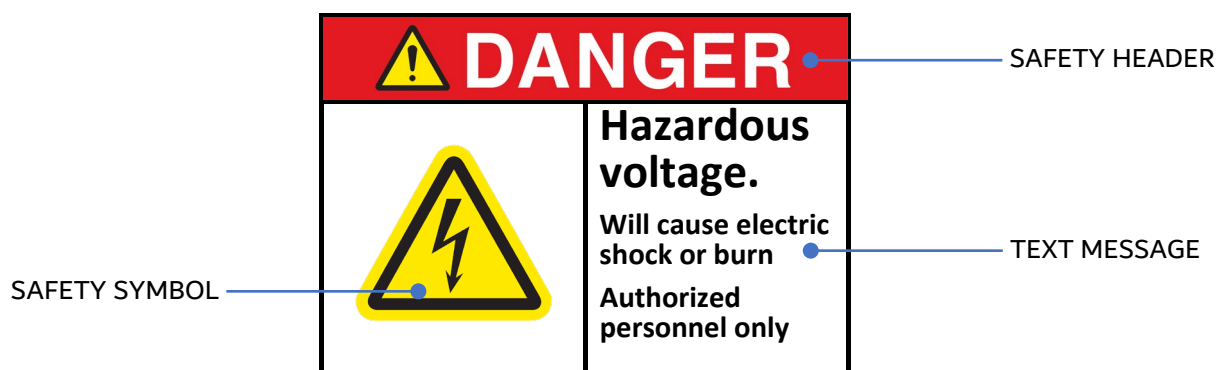
The use of safety signs shall be considered only if elimination of hazards are not possible. Safety sign is a type of administrative control and does not replace risk control measures (e.g. engineering controls such as machine guarding or isolation), proper work methods, safety instructions, or accident prevention training; but should be used in conjunction with sound safe systems of work and applicable risk control measures.


## C. Components of Safety Signboard



This technical guideline adopts the use of current standards and best practices on safety signboards such as ANSI Z535 and ISO 7010 in order to effectively communicate safety by:

- Knowing the hazard. Using internationally registered graphical symbols that are easily understood;
- Understand the hazard. Contains more substantive content that explains hazard(s); and
- Avoid the hazard.










Safety signboard shall generally contain the following three essential elements:




 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>

Element	Description
SAFETY HEADER	The top most part of the safety signboard which contains the <i>Safety Alert Symbol</i> and <i>Signal Words</i> .
	Safety Alert Symbol – indicates presence of a potential personal injury hazard. This symbol is only used for DANGER, WARNING and CAUTION signs, labels and tags. 
	Signal Words – intended to provide alerting safety messages for hazards (DANGER, WARNING and CAUTION), non-hazard related (NOTICE) and instructions (SAFETY INSTRUCTIONS)
	DANGER – used for hazardous situation which, if not avoided, <u>will</u> result in serious injury or death. Shall be used only in the most extreme situations. 








SAFETY HEADER (Continuation)	CAUTION – used for hazardous situation which, if not avoided, <u>could</u> result in minor or moderate injury. 
	NOTICE – used for important information but not directly related to hazard (e.g. hygiene, equipment or property damage, security) 
	SAFETY INSTRUCTIONS – used to provide information on safety procedures/instructions. Other definitive words can also be used aside from the aforementioned (e.g. LOCK OUT TAG OUT PROCEDURE, SAFE CHEMICAL HANDLING PROCEDURE). 
SAFETY SYMBOL	Graphical symbols or pictograms used to communicate various hazards, precautions and other information to bridge language barriers. In accordance with ISO 7010 standard on graphical symbols, symbols are categorized as: <ul style="list-style-type: none"> <li>• Mandatory action signs;</li> <li>• Prohibition signs;</li> <li>• Warning signs;</li> <li>• Safe condition signs; and</li> <li>• Fire safety signs.</li> </ul> Examples: <div>       </div>

	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>

	For more information refer to Annex C.
TEXT MESSAGES	<p>Text used to convey safety message that is intended to be concise and clear (easy to understand) to the intended reader of the message. Whenever possible, text message shall include the following:</p> <ul style="list-style-type: none"> <li>• Type of hazard;</li> <li>• Probable consequence of not avoiding or disregarding the hazard; and</li> <li>• How to avoid the hazard.</li> </ul>

#### D. Safety Symbol Requirements



Graphical symbols or pictograms contained in safety signboards shall comply with the shape, color and design principles of ISO 7010 standard as shown below:

Sign Type	Meaning or Purpose	Color	Shape	Example
Prohibition sign	Prohibition, Stop, Don't Do.	Red	Circle with diagonal line	 Do not use with hand-held grinder
Mandatory sign	Must do, Obligatory.	Blue	Circle	 Wear a safety harness
Warning sign	Warn of hazard or danger, Take precaution, Be careful	Yellow	Equilateral triangle with rounded corners	 Warning; Drop (fall)
Safe condition sign*	Safety equipment, Emergency exits, Doors, Escape routes, Information	Green	Square or rectangle	 Emergency exit (right hand)
Fire safety sign*	Fire protection	Red	Square	 Fire hose reel

\* For requirements on fire safety, exit and directional signs, refer to UAE Fire and Life Safety Code of Practice

If ISO 7010 (as shown in Annex C) does not contain a suitable symbol then it is acceptable to design your own, providing it conforms to the general principles described in this technical guideline.



 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>	 بلدية دبي DUBAI MUNICIPALITY
	<b>Document title:</b>	Technical Guidelines for Safety Signs at Work	<b>عنوان الوثيقة:</b>	
	<b>Doc Ref.</b>	DM-HSD-GU99-SSW2	<b>رقم الوثيقة:</b>	

Example: The use of crescent symbol as this is the generic emblem for medicine, commonly associated with first aid and medical services in UAE.



If a safety symbol needs to be designed it should be as simple as possible, containing only the necessary detail. Guidance can be found in BS ISO 3864-1:2011 and BS ISO 3864-4:2011, where design principles that can be followed are described. The principles will ensure the pictogram is understood for the application and will meet the geometric shape and color required by the above standards and this technical guideline.

#### E. General Requirements on Using Safety Signs

Employers must ensure to take into account the results of hazard identification and risk assessment in order to determine the applicability of using safety signs.



Safety signs shall be used only in circumstances wherein elimination of hazard(s) is/are not possible and the risk is still significant (residual risk) despite application of risk control measures or safer ways to conduct the work. Safety signs are used only as an additional measure to aid in further reducing the residual risk by warning the employees of any remaining significant risk and/or to provide instructions on measures to be undertaken in relation to these risks.

In cases wherein the employees' sight or hearing is impaired (i.e. due to wearing personal protective equipment, employee is considered as people of determination/special needs), additional measures should be taken to ensure that the employees can see or hear the warning sign or signal (e.g. providing warning system with visual indicators such as blinking lights, increasing the warning signs brilliance or volume).

Employer may also use more than one type of safety sign (as necessary) in order to ensure that hazards/risks are effectively communicated (e.g. illuminated safety signboard indicating a specific risk combined with an acoustic alarm meaning "general danger" to alert people, or hand signals combined with verbal instructions).

Language used in safety signs shall be understandable and appropriate to the majority of the current workforce (e.g. Arabic, English). The employer shall take into account the languages spoken and read by

Issue date: 04.10.2021	OPEN DATA / بيانات مفتوحة	V 2.0
Superseded Issue Date: 23.07.2020		Page 9 of 28

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>	 بلدية دبي DUBAI MUNICIPALITY
	<b>Document title:</b>	Technical Guidelines for Safety Signs at Work	<b>عنوان الوثيقة:</b>	
	<b>Doc Ref.</b>	DM-HSD-GU99-SSW2	<b>رقم الوثيقة:</b>	

the employees in order to overcome barriers in the effective implementation of control measures including use of safety signs.

Text message used in the safety signboard must be chosen to reflect the same safety symbol category. So, for example, if a mandatory symbol is used, ensure that accompanying text message describes the mandatory nature (using the word “must” rather than “should” or “may”) of the action to be taken, such as “Face protection must be worn”.

Employer shall ensure that safety signs are to be clearly seen/heard in all intended directions and are not obstructed at all times.

Employers shall ensure that signboards are strategically placed from one another (be placed not too close from each other) to avoid confusion or information being disseminated is overlooked.

Permanent safety signboards shall be fixed in workplaces as needed. Temporary signboards shall be used only in circumstances wherein the hazards and work area is temporary (e.g. portable warning sign used by cleaners while the floor is still slippery).

In cases wherein the source of hazard has been removed or hazard is no longer existent (e.g. change in activity, equipment removal, etc.), the unnecessary safety signboard shall be removed so that the misleading information is not displayed.

In instances wherein the hazard is not eliminated during power failure, the employer shall consider the use of safety signs which are made of reflective or photo-luminescent materials; or equipped with back-up power for illuminated signs.


Safety signboards shall be made of durable material, free of sharp edges, securely fixed and properly maintained.

#### F. Safety Signboard Location, Size and Style Requirements

Safety signboards shall be adequately sized and be fixed in a location wherein it can be understandable from the intended safe viewing distance and should not be placed on or adjacent to moveable objects (e.g. doors, windows, etc.).

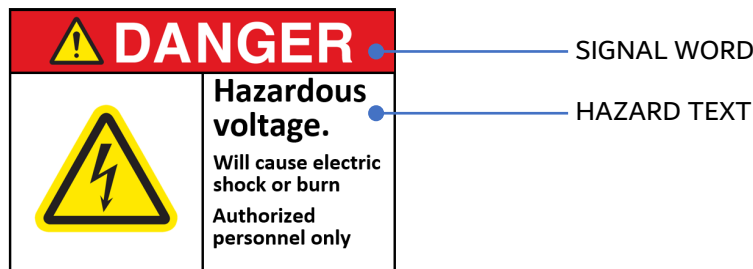
Signboards shall be placed in locations wherein it will give enough time for the people to avoid the hazard or conduct the appropriate action.

Issue date: 04.10.2021	OPEN DATA / بيانات مفتوحة	V 2.0
Superseded Issue Date: 23.07.2020		Page 10 of 28

	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>

Size of letter for the text message shall be of a size that enables the intended viewer (person with normal vision or corrected vision) to read the text message at a safe viewing distance from the hazard. Refer to Annex D (Guidance on safe viewing distance and text size).

Signal word letter height shall be at least 50% greater than the capital letter of the hazard text.



Flat safety signboards is recommended to be used in cases wherein the anticipated viewing angle is straight on or less than 60° from center. Panoramic and flag mounted styles are used to allow the safety signboards to be seen from an angle (see Figures below).





## G. Safety Signboard Material Requirements

Employers shall ensure to choose the right materials that will be used in safety signboards or illuminated signs because using inappropriate or substandard materials may unnecessarily put their employees at risk from getting hurt due to “being unreadable”, “failure to warn” or “inadequate warnings”.

Materials used for safety signs shall be matching the environmental conditions of the workplace, intended location of signs and planned installation methods. The following are some of the important factors that needs to be considered when selecting materials for safety signs:

- Indoor vs. outdoor conditions;
- Fade resistance;
- Lighting conditions;
- Temperature extremes and variations;

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>	 بلدية دبي DUBAI MUNICIPALITY
	<b>Document title:</b>	Technical Guidelines for Safety Signs at Work	<b>عنوان الوثيقة:</b>	
	<b>Doc Ref.</b>	DM-HSD-GU99-SSW2	<b>رقم الوثيقة:</b>	

- Emergency lighting conditions (and the possible need for reflective or photo-luminescent materials for particular safety signs and markings so that it can be seen in the event of power failure);
- Graffiti-resistant characteristics (typically for signs exposed to the public);
- Adhesives that will bond the safety signboard to the intended mounting surfaces;
- Contamination issues;
- Wash-down conditions;
- Maintenance and cleaning procedures.

## H. Acoustic Signals and Illuminated Signs Requirements

In circumstances wherein acoustic signals or illuminated signs needs to be activated (either automatically or in-line with other safety arrangements), it is important that they remain “on” so for as long as the danger exists or until receipt of any planned acknowledgement.

Acoustic signals and illuminated signs are required to be checked at regular intervals so as to ensure proper functioning. Frequency of checking shall be increased for more critical and riskier work activities/workplaces.

### Acoustic signals

Acoustic signals should be set at a level which is considerably higher than the ambient noise (i.e. 10 dB higher than the level of ambient noise). However, ensure that the level is not excessive or painful. In addition, it is important that the signals are easily recognizable, particularly in terms of pulse length and interval between pulses or group of pulses.

Ensure that the acoustic signals are used only one at a time.



If a device is equipped to emit an acoustic signal at variable frequencies (this includes an intermittent signal operating on a discrete frequency) or constant frequencies, use the variable frequency set at 10 dB above the ambient level at the appropriate frequency to indicate a higher level of danger or a more urgent need of action or intervention.

### Illuminated signs

Ensure that the illuminated signs are bright enough to be seen, without causing glare.

Care should be taken to ensure that a number of illuminated signs are not used together if this could give rise to confusion. Confusion could also arise if an illuminated sign is placed close to any other similar light source.

Issue date: 04.10.2021	OPEN DATA / بيانات مفتوحة	V 2.0
Superseded Issue Date: 23.07.2020		Page 12 of 28

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b>	<b>Health &amp; Safety Department</b>	<b>الوحدة التنظيمية:</b>	 بلدية دبي DUBAI MUNICIPALITY
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>	
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>	

Luminous area of the sign may be of a single safety color or contain a pictogram on a specified background consistent with the specified requirements of this guideline.

If an illuminated sign can be either be continuously “on” or operated intermittently (e.g. flash on and off), flashing sign shall be used to indicate a higher level of danger or a more urgent need of action or intervention.

The flash duration and frequency for intermittent illuminated sign should be determined in a way that will ensure that the message is properly understood, and will avoid any confusion with other illuminated signs, including continuous illuminated signs.

If a flashing sign is used together with an acoustic signal, it is important to synchronize the two. This means that the duration and frequency of flashes should be in line with the pulse length and interval for an acoustic signal. The choice of equipment and the way it operates shall take into account other risks (e.g. Epilepsy could be triggered with fast flicker rates for some people or some types of electronic pulse could be a danger to storage facilities containing certain explosives).

Where flashing signs are used to warn impending danger, it is important to ensure that measures are in place to either quickly detect the failure of the sign or to prevent its failure (e.g. by fitting duplicate bulbs, etc.)


## I. Using Signs on Containers and Pipes

Employers shall ensure that all containers, tanks and vessels including visible pipes in the workplace containing or transporting dangerous goods are labelled or affixed with the necessary hazard class and handling labels in accordance with the Dubai Municipality Code of Practice for the Management of Dangerous Goods in the Emirate of Dubai and Globally Harmonized System of Classification and Labeling of Chemicals (GHS) standard.

When deciding where signs or labels should be placed on pipework containing dangerous goods, it is essential not to use too many signs to avoid confusion.

Signs or labels will be most useful at points where employees are likely to be exposed to the contents of the pipework, for example sampling or filling points, drain valves, and flanged joints which are likely to need periodic breaking. Where there are long pipe runs on which points of potential exposure are infrequent, labels or signs may also be displayed at intermediate points.

Issue date: 04.10.2021	OPEN DATA / بيانات مفتوحة	V 2.0
Superseded Issue Date: 23.07.2020		Page 13 of 28

	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>



#### J. Using Signs for Dangerous Goods Storage Areas

All areas, rooms and enclosures used to store significant quantities of dangerous goods shall be provided with suitable hazard class and warning signs in accordance with the requirements of this Technical Guideline, Dubai Municipality Code of Practice for the Management of Dangerous Goods in the Emirate of Dubai and Globally Harmonized System of Classification and Labeling of Chemicals (GHS) standard.

Hazard class and warning signs for dangerous goods stores must be positioned, as appropriate, in conspicuous areas such as near storage areas or on doors leading into storage rooms.

#### K. Using Signs to Mark Workplace Obstacles, Dangerous Locations, and Access Routes

Workplace obstacles and dangerous locations (e.g. edge of a raised platform, area where objects may fall, etc.) shall be marked consisting of yellow and black (or red and white) stripes at an angle of 45° and more or less of equal size (see Figure below).



Access routes (ingress or egress) within workplaces where necessary, for reasons of health and safety, shall be marked with a continuous line (preferably yellow or white), taking into account the color of the ground surface.

Traffic routes in built-up areas outdoors do not have to be marked if suitable pavements or barriers are already provided.

#### L. Fire Safety Signs


Employer shall ensure that fire safety signs including exit and directional signs are provided at appropriate locations within the workplace premises/building which is in accordance with the requirements of UAE Fire and Life Safety Code of Practice, Dubai Universal Design Code and other applicable UAE regulations.

#### M. Maintenance

Employer shall ensure that safety signs are to be appropriately maintained so as to ensure proper performance of its intended function.

Safety signs and signals (e.g. emergency lighting, acoustic signals) which require some form of power for its operation, shall be provided with a guaranteed supply of power or back-up in the event of power failure (unless the hazard is itself eliminated during the power failure).

Issue date: 04.10.2021	OPEN DATA / بيانات مفتوحة	V 2.0
Superseded Issue Date: 23.07.2020		Page 14 of 28

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>



Safety signs or signals which are found to be damaged, worn-out, missing or are not properly functioning are to be immediately and suitably replaced or repaired as per manufacturers' instructions (e.g. safety signboards, acoustic signals, illuminated signs).

Employers shall ensure to properly keep records of any maintenance activities (e.g. routine cleaning of signboards, regular/planned checking of illuminated signs, testing of acoustic signals, etc.) and be made readily available to Dubai Municipality OHS inspectors and other regulatory agencies for review and demonstrate compliance with pertinent UAE and DM regulations.

#### **N. Information, Instruction and Training**

Employer shall ensure that all employees receives appropriate instruction and training in the meaning of safety signs either seen or heard and the control measures to be implemented in connection with safety signs.

Employer shall ensure that the provided information, instruction and training received by each employee on the measures to be taken in connection with safety signs are relevant and understandable.

Records of any training including induction and tool box talks shall be properly kept for at least five (5) years and be made readily available to Dubai Municipality OHS inspectors and other regulatory agencies for review and demonstrate compliance with pertinent UAE and DM regulations.

Ensure that the training are delivered regularly (at least once a year). Training assessment shall include explaining the meaning of any safety sign shown, consequences of not following the warning or instruction given by the sign and measures to be taken in connection with safety signs.

## **6. REFERENCES**

American National Standard Institute (ANSI) – Safety Signs and Colors Standards (ANSI Z535:2011)


Clarion Safety Systems – Implementation Guide on New OSHA/ANSI Safety Sign Systems for Today's Workplaces

European Standard (EN)/International Organization for Standardization (ISO) – Graphical Symbols – Safety Colours and Safety Signs – Registered Safety Signs (ISO 7010:2011)

United Kingdom: Health and Safety Executive (HSE) – Safety Signs and Signals

United States of America: Occupational Safety and Health Administration (OSHA) – Part 1910: Specifications for Accident Prevention Signs and Tags

Issue date: 04.10.2021	OPEN DATA / بيانات مفتوحة	V 2.0
Superseded Issue Date: 23.07.2020		Page 15 of 28

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>




## ANNEX A: SAMPLE CHECKLIST FOR SAFETY SIGNS AT WORK

This annex is included with the intent of providing additional information to guide employers/companies in developing and ensuring the presence of an effective safety sign system within their workplace.

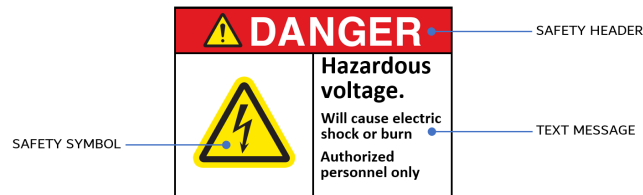
SAMPLE CHECKLIST FOR SAFETY SIGNS AT WORK			
Inspected by:		Signature:	
Work Area: (Specify area/location being checked)		Date of Inspection:	
SURVEY OF EXISTING SAFETY SIGNS IN PLACE			
Inspector shall walk through the facility and note the location of all existing safety signs within the specific location/work area.			
Aspects to be checked		Yes	No
1	Are there multiple safety signs posted in the same location (sign clutter)?	<input type="checkbox"/>	<input type="checkbox"/>
2	Are there unnecessary signs that needs to be removed or combined as necessary?	<input type="checkbox"/>	<input type="checkbox"/>
3	Are there missing or damaged signs?	<input type="checkbox"/>	<input type="checkbox"/>
4	Is the hazard wherein the safety sign is pertaining to is present (e.g. safety sign is still posted despite removal of equipment)?	<input type="checkbox"/>	<input type="checkbox"/>
5	Are there posted safety messages on paper and taped on walls and doors with the intention of replacing these in the future?	<input type="checkbox"/>	<input type="checkbox"/>
6	Are there out of date signs? Not in accordance with existing format, colors, contents and symbols as specified in ISO 7010 and the requirements specified in Dubai Municipality Technical Guideline on Safety Signs at Work.	<input type="checkbox"/>	<input type="checkbox"/>
7	Are there areas where new safety signs needs to be provided? Also refer to your companies' risk assessment to check the need of providing safety signs in the specified work activity/location.	<input type="checkbox"/>	<input type="checkbox"/>
<b>Note:</b> Completing this checklist is beneficial for companies in developing or improving safety signs system through the replacement/removal of old signs with appropriate safety signs (Refer to Annex B).			



 GOVERNMENT OF DUBAI	Organization Unit:	Health & Safety Department	الوحدة التنظيمية:
	Document title:	Technical Guidelines for Safety Signs at Work	عنوان الوثيقة:
	Doc Ref.	DM-HSD-GU99-SSW2	رقم الوثيقة:

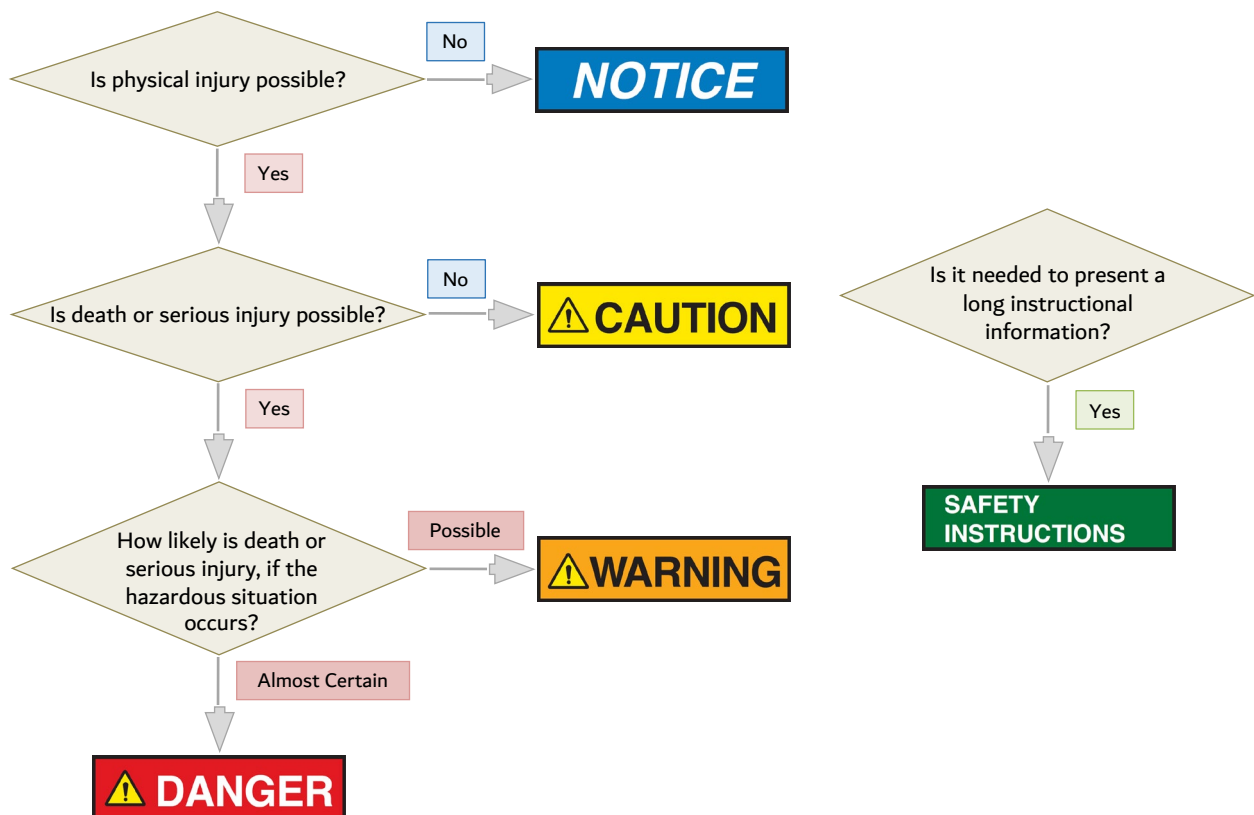
## ANNEX B: GUIDANCE FOR MAKING SAFETY SIGNBOARD



Upon completion of safety signs survey (Annex A) and taking into account the results of hazard identification and risk assessment (which includes control measures that needs to be undertaken), the employer/company shall then determine the appropriate safety signs to be provided in order further reduce the residual risk.



### Step 1: Select the correct Hazard Alerting Signal Word for Safety Header

In determining the appropriate hazard alerting signal word (e.g. Danger, Warning, Caution, etc.), the below matrix is to be referred for guidance.



 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>	 بلدية دبي DUBAI MUNICIPALITY
	<b>Document title:</b>	Technical Guidelines for Safety Signs at Work	<b>عنوان الوثيقة:</b>	
	<b>Doc Ref.</b>	DM-HSD-GU99-SSW2	<b>رقم الوثيقة:</b>	

## Step 2: Select the Safety Symbol

Select one or more graphical symbol(s) or pictogram(s) that will best communicate the hazards, precautions and other information for the safety sign being created. Refer to Section 5D for safety symbol requirements and Annex C on ISO 7010 standard on applicable graphical symbols which are categorized as:

- Mandatory action signs;
- Prohibition signs;
- Warning signs;
- Safe condition signs; and
- Fire safety signs.

## Step 3: Convey appropriate Text Message

Ensure that the text message that will be conveyed in the safety sign is concise and clear to the intended reader. Also refer to Annex D for guidance on the letter size of text message.

Text message used in the safety signboard must be chosen to reflect the same safety symbol category. So, for example, if a mandatory symbol is used, ensure that accompanying text message describes the mandatory nature (using the word “must” rather than “should” or “may”) of the action to be taken, such as “Face protection must be worn”.

Whenever possible, text message shall include the following:

- Type of hazard;
- Probable consequence of not avoiding or disregarding the hazard; and
- How to avoid the hazard.


The order of information in the text message shall be flexible and should be determined by reasonable factors related on how to avoid accidents/injuries, such as:

- The intended persons that will be reading the message conveyed in the safety sign; and
- The reaction time to avoid the hazard.

In addition, the following are the recommended practices in formatting the text message:

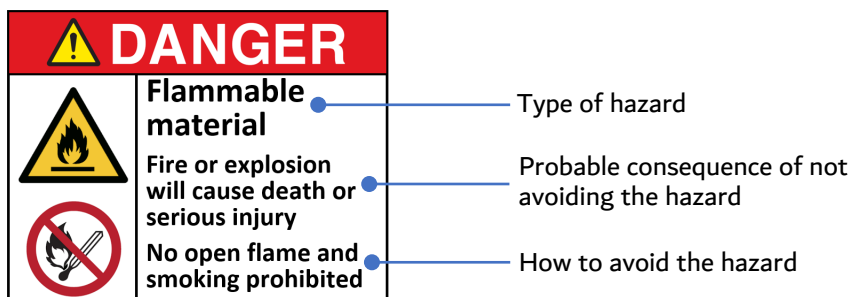
- Use headline style or sentence style text (Capitalization of select words) e.g. “Flammable Material” or “Flammable material”
- Use active voice statements e.g. “Fire or explosion will cause death or serious injury” – active voice
- “Death or serious injury will be caused by fire or explosion” – passive voice


Issue date: 04.10.2021	OPEN DATA / بيانات مفتوحة	V 2.0
Superseded Issue Date: 23.07.2020		Page 18 of 28

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>






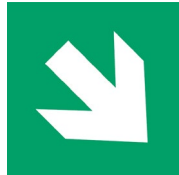





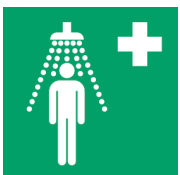





- Subject of the text message shall be clear/specific and avoid use of prepositional/vague phrases e.g.  
“No open flame and smoking prohibited” – clear and specific message
- “Unsafe acts are prohibited” – message is too general/vague
- Use upper and lower case letters
- Use left alignment for English text and right alignment for Arabic text

Example: Safety signboard for chemical drums containing flammable material





 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>

## ANNEX C: EN ISO 7010 SAFETY SYMBOLS







Safe Condition Symbols					
Safety Symbol					
Reference Number	E001	E002	E003	E004	E005
Referent	Emergency exit (left hand)	Emergency exit (right hand)	First aid*	Emergency telephone*	Direction arrow (90° angle)
Safety Symbol					
Reference Number	E006	E007	E008	E009	E010
Referent	Direction arrow (45° angle)	Evacuation assembly point	Break to obtain access	Doctor*	Automated external heart defibrillator*
Safety Symbol					
Reference Number	E011	E012	E013	E016	E017
Referent	Eyewash station*	Safety shower*	Stretcher*	Emergency window with escape ladder	Rescue window
Safety Symbol					
Reference Number	E018	E019			
Referent	Turn anticlockwise to open	Turn clockwise to open			











\* For safe condition symbols involving first aid and related equipment, crescent symbol shall be used as this is the generic emblem for medicine in UAE (Refer to Section 5D).




 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department	<b>الوحدة التنظيمية:</b>	 بلدية دبي DUBAI MUNICIPALITY
	<b>Document title:</b> Technical Guidelines for Safety Signs at Work	<b>عنوان الوثيقة:</b>	
	<b>Doc Ref.</b> DM-HSD-GU99-SSW2	<b>رقم الوثيقة:</b>	





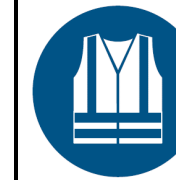



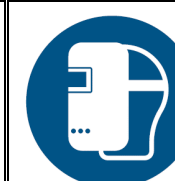
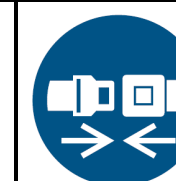






## Continuation of Annex C


Fire Equipment Symbols					
Safety Symbol					
Reference Number	F001	F002	F003	F004	F005
Referent	Fire extinguisher	Fire hose reel	Fire ladder	Collection of firefighting equipment	Fire alarm call point
Safety Symbol					
Reference Number	F006				
Referent	Fire emergency telephone				

Mandatory Action Symbols					
Safety Symbol					
Reference Number	M001	M002	M003	M004	M005
Referent	General mandatory action sign	Refer to instruction manual/booklet	Wear ear protection	Wear eye protection	Connect an earth terminal to the ground
Safety Symbol					
Reference Number	M006	M007	M008	M009	M010
Referent	Disconnect mains plug from electrical outlet	Opaque eye protection must be worn	Wear safety footwear	Wear protective gloves	Wear protective clothing

	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>


## Continuation of Annex C

Mandatory Action Symbols						
Safety Symbol						
Reference Number	M011	M012	M013	M014	M015	
Referent	Wash your hands	Use handrail	Wear a face shield	Wear head protection	Wear high visibility clothing	
Safety Symbol						
Reference Number	M016	M017	M018	M019	M020	
Referent	Wear a mask	Wear respiratory protection	Wear a safety harness	Wear a welding mask	Wear safety belts	
Safety Symbol						
Reference Number	M021	M022	M023	M024	M025	
Referent	Disconnect before carrying out maintenance or repair	Use barrier cream	Use footbridge	Use this walkway	Protect infants' eyes with opaque protection	
Safety Symbol						
Reference Number	M026					
Referent	Use protective apron					

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>

## Continuation of Annex C


Prohibition Symbols					
Safety Symbol					
Reference Number	P001	P002	P003	P004	P005
Referent	General prohibition sign	No smoking	No open flame; Fire, open ignition source and smoking prohibited	No thoroughfare	Not drinking water
Safety Symbol					
Reference Number	P006	P007	P008	P010	P011
Referent	No access for forklift trucks and other industrial vehicles	No access for people with active implanted cardiac devices	No metallic articles or watches	Do not touch	Do not extinguish with water
Safety Symbol					
Reference Number	P012	P013	P014	P015	P017
Referent	No heavy load	No activated mobile phones	No access for people with metallic implants	No reaching in	No pushing
Safety Symbol					
Reference Number	P018	P019	P020	P021	P022
Referent	No sitting	No stepping on surface	Do not use lift in the event of fire	No dogs	No eating or drinking

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>





















## Continuation of Annex C


Prohibition Symbols					
Safety Symbol					
Reference Number	P023	P024	P025	P026	P027
Referent	Do not obstruct	Do not walk or stand here	Do not use this incomplete scaffold	Do not use this device in a bathtub, shower or water filled reservoir	Do not use this lift for people
Safety Symbol					
Reference Number	P028	P029	P030	P031	P032
Referent	Do not wear gloves	No photography	Do not tie knots in rope	Do not alter the state of the switch	Do not use for face grinding
Safety Symbol					
Reference Number	P033	P034			
Referent	Do not use for wet grinding	Do not use with hand-held grinder			












	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	Technical Guidelines for Safety Signs at Work	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	DM-HSD-GU99-SSW2	<b>رقم الوثيقة:</b>


## Continuation of Annex C

Warning Symbols					
Safety Symbol					
Reference Number	W001	W002	W003	W004	W005
Referent	General warning sign	Warning: Explosive material	Warning: Radioactive material or ionizing radiation	Warning: Laser beam	Warning: Non-ionizing radiation
Safety Symbol					
Reference Number	W006	W007	W008	W009	W010
Referent	Warning: Magnetic field	Warning: Floor-level obstacle	Warning: Drop (fall)	Warning: Biological hazard	Warning: Low temperature/freezing conditions
Safety Symbol					
Reference Number	W011	W012	W013	W014	W015
Referent	Warning: Slippery Surface	Warning: Electricity	Warning: Guard dog	Warning: Forklift trucks and other industrial vehicles	Warning: Overhead load
Safety Symbol					
Reference Number	W016	W017	W018	W019	W020
Referent	Warning: Toxic material	Warning: Hot surface	Warning: Automatic start-up	Warning: Crushing	Warning: Overhead obstacle

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>

## Continuation of Annex C

Warning Symbols					
Safety Symbol					
Reference Number	W021	W022	W023	W024	W025
Referent	Warning: Flammable material	Warning: Sharp element	Warning: Corrosive substance	Warning: Crushing of hands	Warning: Counterrotating rollers
Safety Symbol					
Reference Number	W026	W027	W028	W029	
Referent	Warning: Battery charging	Warning: Optical radiation	Warning: Oxidizing substance	Warning: Pressurized cylinder	

 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>



## ANNEX D: SAFETY SIGN SAFE VIEWING DISTANCE AND TEXT SIZE GUIDANCE

This annex contains ANSI Z535.2-2011 guidance on text message letter size and safe viewing distance to guide employers/companies in developing and ensuring the presence of an effective safety sign system within their workplace.

In determining the safe viewing distance, it is very important to understand the following important elements which are:

- Viewing Conditions; and
- Text Size

The conditions for reading the safety sign shall be evaluated by the employer/end user. If the safety sign is to be posted in a location where:

- Workers will have adequate time to react to a hazard;
- Text message is understandable and easy to read;
- Text message can be read without obstructions (e.g. from equipment, materials, smoke, etc.); and
- It is well lighted;

Then the safety sign is likely posted in “favorable” conditions.

If there are factors such as obstructions, poor lighting conditions, or decreased reaction time, the conditions may be “unfavorable” and the safe viewing distance should be reduced. Only the end user can consider the use environment and make this determination.

Dimensions of the safety sign does not necessarily effect the viewing distance, but safety signs having larger dimensions generally have larger text sizes, which directly effects viewing distances.

Table 1 in the succeeding page provides guidance on the minimum safe viewing distance and text size of safety signs under “favorable” and “unfavorable” reading conditions.

However, as a best practice, the letter size of the text message shall be made larger than the specified values in the table below due to the following reasons but not limited to:

- Safety sign shall be more prominent from the other information that are posted in the area.
- Improving the text clarity under low light or other unfavorable viewing conditions.
- Earlier alerting of persons than the minimum safe viewing distance.
- Convey special importance on certain statements in the text messages.
- Increased legibility for persons who have vision problems with small text.

Issue date: 04.10.2021	OPEN DATA / بيانات مفتوحة	V 2.0
Superseded Issue Date: 23.07.2020		Page 27 of 28


 GOVERNMENT OF DUBAI	<b>Organization Unit:</b> Health & Safety Department		<b>الوحدة التنظيمية:</b>
	<b>Document title:</b>	<b>Technical Guidelines for Safety Signs at Work</b>	<b>عنوان الوثيقة:</b>
	<b>Doc Ref.</b>	<b>DM-HSD-GU99-SSW2</b>	<b>رقم الوثيقة:</b>



Table 1: Minimum Recommended Safe Viewing Distance and Text Size on Various Reading Conditions

Minimum Safe Viewing Distance	Minimum Text Size for Favorable Reading Conditions	Minimum Text Size for Unfavorable Reading Conditions
1.22 meters (4 feet)	4.06 mm. (0.16 in.)	8.38 mm. (0.33 in.)
1.83 meters (6 feet)	6.10 mm. (0.24 in.)	12.70 mm. (0.50 in.)
2.44 meters (8 feet)	8.13 mm. (0.32 in.)	16.76 mm. (0.66 in.)
3.05 meters (10 feet)	10.16 mm. (0.40 in.)	21.08 mm. (0.83 in.)
4.57 meters (15 feet)	15.24 mm. (0.60 in.)	32.26 mm. (1.27 in.)
6.10 meters (20 feet)	20.32 mm. (0.80 in.)	42.67 mm. (1.68 in.)
9.14 meters (30 feet)	30.48 mm. (1.20 in.)	63.75 mm. (2.51 in.)
12.19 meters (40 feet)	40.64 mm. (1.60 in.)	85.34 mm. (3.36 in.)
18.29 meters (60 feet)	60.96 mm. (2.40 in.)	128.02 mm. (5.04 in.)
24.38 meters (80 feet)	81.28 mm. (3.20 in.)	170.69 mm. (6.72 in.)
30.48 meters (100 feet)	101.60 mm. (4.00 in.)	213.36 mm. (8.40 in.)
38.10 meters (125 feet)	127.00 mm. (5.00 in.)	266.45 mm. (10.49 in.)
45.72 meters (150 feet)	152.40 mm. (6.00 in.)	319.53 mm. (12.58 in.)
60.96 meters (200 feet)	203.20 mm. (8.00 in.)	426.47 mm. (16.79 in.)

For any further information, please contact:

Health and Safety Department

Dubai Municipality

Tel: 800900

[Safety@dm.gov.ae](mailto:Safety@dm.gov.ae)

Issue date: 04.10.2021	OPEN DATA / بيانات مفتوحة	V 2.0
Superseded Issue Date: 23.07.2020		Page 28 of 28