



# Lusail Real Estate Development Company

## Health, Safety, Security, Environment, Logistics & Quality Department

### Lusail Construction Safety Procedural Forms/Checklists – Respiratory Protective Equipment Selection Guide

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#### COMPANY PROPRIETARY INFORMATION

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### Amendment Record

This document is reviewed to ensure its continuing relevance to the systems and process that it describes. A record of contextual additions or omissions is given below:

Rev. No	Description / Comments	Prepared By	Checked By	Approved By	Issue Date
1	(Pg. 1) Company Propriety Information – Not controlled if printed has been added.	HSE Working Group	Michael Ford	 Uwe Krueger	1 <sup>st</sup> April 2015
1	(Pg. 2) Revised Amendment Table	HSE Working Group	Michael Ford <i>Michael Ford</i>	 Uwe Krueger	1 <sup>st</sup> April 2015



## Respiratory Protective Equipment Selection Guide

### ———— Chemical Gas or Vapor Contaminants ————

#### *Atmosphere immediately dangerous to life or health*

- Self-contained breathing apparatus operated in positive pressure mode
- OR combination airline respirator with auxiliary positive pressure self-contained air supply
- *For use in escape from an atmosphere immediately dangerous to life or health:* air purifying, full facepiece respirator with chemical canister approved for escape only OR self-rescue mouthpiece respirator approved for escape only

#### *Atmosphere not immediately dangerous to life or health*

- Airline respirator
- OR air purifying half mask (ex. 3M 5000, 6000 Series dual cartridge or equivalent) or full facepiece (ex. 3M 7000 Series dual cartridge or equivalent) respirator with chemical cartridges or canister
- OR powered air purifying respirator with chemical cartridges

### ———— Aerosols – Dust, Fibers, Fume, Mist, Particulates ————

#### *Atmosphere immediately dangerous to life or health*

- Self-contained breathing apparatus operated in positive pressure mode
- OR combination airline respirator with auxiliary positive pressure self-contained air supply
- *For use in escape from an atmosphere immediately dangerous to life or health:* air purifying, full facepiece respirator with chemical canister approved for escape only
- OR self-rescue mouthpiece respirator approved for escape only

#### *Atmosphere not immediately dangerous to life or health*

- Airline respirator
- OR air purifying half face (ex. 3M 8210, 8212, 8233, 5000, 6000 Series dual cartridge or equivalent), full facepiece (ex. 3M 7000 Series dual cartridge or equivalent) respirator with particulate filter cartridges or canister
- OR powered air purifying respirator with particulate filter cartridges
- OR airline abrasive blasting respirator

### ———— Combination Gas, Vapor, Dust, Fibers, Fume, Mist, Aerosols ————

#### *Atmosphere immediately dangerous to life or health*

- Self-contained breathing apparatus operated in positive pressure mode
  - OR combination airline respirator with auxiliary positive pressure self-contained air supply
  - For use in escape from an atmosphere immediately dangerous to life or health: air purifying, full facepiece respirator with combination chemical and particulate filter in canister approved for escape only
  - OR self-rescue mouthpiece respirator approved for escape only
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*Atmosphere not immediately dangerous to life or health*

- Airline respirator
- OR air purifying half face (ex. 3M 5000,6000 Series dual cartridge or equivalent), or full facepiece respirator (ex. 3M 7000 Series dual cartridge or equivalent) with combination chemical and particulate filter cartridges or canister
- OR powered air purifying respirator with combination chemical and particulate filter cartridges

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———— Oxygen Deficient or Enriched Atmospheres ————

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*Oxygen availability*

- Self-contained breathing apparatus
  - OR combination airline respirator with auxiliary positive pressure self-contained air supply
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Air supplying respirators are required if the oxygen content in the atmosphere is less than 19.5% or more than 23.5%. Lusail HSE Department recommends supplied air respirators when oxygen concentrations are below 20.9%

**NO respiratory protection equipment is approved for work in an atmosphere containing 10% of the lower explosive limits of a contaminant.**

This guide shall be used for general selection purposes only. The appropriate respirators or their equivalent shall be used when called for by the job specifications, contract specifications or Project Manager.

## Respirator Protection Factors (PF)

<u>Type of Respirator</u>	<u>Protection Factor</u>
Quarter facepiece, negative pressure, air purifying *	10
Half facepiece, negative pressure, air purifying *	10
Full facepiece, negative pressure, air purifying *	50
Powered air purifying, hood or helmet and visor *	25
Powered air purifying, half facepiece *	50
Powered air purifying, full facepiece *	100
Airline, demand, half facepiece **	10
Airline, demand, full facepiece **	50
Airline, continuous flow or pressure demand, half facepiece **	1000
Airline, continuous flow or pressure demand, full facepiece ***	10000+
Airline, continuous flow, helmet or hood **	1000
†SCBA, demand, open circuit or negative pressure closed circuit, full facepiece **	50
†SCBA, pressure demand, open circuit or positive pressure closed circuit, half facepiece **	1000
†SCBA, pressure demand, open circuit or positive pressure closed circuit, full facepiece	10000+

\* These respirators must not be used:

- ◆ When the air contaminant concentration exceeds the maximum use limit stated on the NIOSH/MSHA approval label for the air purifying element in an oxygen deficient atmosphere
- ◆ In an atmosphere immediately dangerous to life or health, except when the respirator is approved for use to escape from such an atmosphere

\*\* These respirators must not be used in an atmosphere immediately dangerous to life or health.

\*\*\* These respirators must not be used in an atmosphere immediately dangerous to life or health, except when the respirator is equipped with an auxiliary self-contained or other positive-pressure mode.

† SCBA = self-contained breathing apparatus.

Always follow the manufacturer's instructions when determining protection factors.

**NO respirators are approved for entry into an atmosphere where the airborne concentration may exceed 10 percent of the lower explosion limit (LEL).**