

RESPIRATORY PROTECTION



EXCELLENCE IN SAFETY

Your Safety Company

Anderco Safety, founded in 1976, has a history of continuous growth, development and innovation. All these are reflected in the achievement of its mission statement - Excellence in Safety.

The company operates from offices and distribution centres in **Dublin and Cork** and has an excellent track record in supplying high quality equipment and clothing across all market sectors. Anderco is now one of the most progressive suppliers of both general and specialised occupational equipment and clothing in Ireland with a client base which includes multi-national organisations from pharmaceutical and chemical to electronics, the service sector, local authorities, government departments and general industry.

Anderco has earned an outstanding reputation for quality and is ISO9002 registered. The company strives to create close working relationships with clients and is proud of its pro-active customer service ethos. This catalogue introduces the **Express Range**, the products which represent those most widely used throughout industry today. These products are available for **24 hour delivery**. Also included is detailed information on the relevant product standards to assist you with the selection process.

Anderco's safety partnership approach has set new standards. From **24 hour, 365 days a year** emergency availability to on site training, Anderco continuously strives to exceed customer expectations. With our designated account managers always on call we are genuinely committed to the success of your business.



Protecting You

Anderco has an extensive product portfolio covering many areas...

- **Head Protection**
- **Eye & Face Protection**
- **Hearing Protection**
- **Respiratory Protection**
- **Hand Protection**
- **Foot Protection**
- **Workwear & Protective Clothing**
- **High Visibility Clothing**
- **Seasonal & Foul Weather Clothing**
- **Corporate Clothing**
- **Cleanroom Clothing & Supplies**
- **Fall Arrest Equipment**
- **Safety Signs**
- **Gas Detection**
- **Chemical Spill Products**
- **Road Safety Products**
- **Hygiene Supplies**
- **First Aid Products**



Respiratory Protection

The hazards presented by airborne contaminants are perhaps the most difficult to protect against, given the wide range of contaminants and environments.

To select the correct respiratory protection it is important to identify the hazard and choose a protector that can provide sufficient protection against it. This catalogue contains guidelines to assist you in the selection process.

Levels of protection can be optimised via training in respirator fitting and use. Anderco Safety can provide full on-site training and assistance in implementing an effective respiratory protection programme.

In the following pages we have detailed our **Express Range**, a cross section of the products most widely used in industry today. Should you wish to see a further selection of products, please contact our **Sales Help Desk on 1850 303 304** for details of our full range.



Respair 1 Disposable Mask

Standard EN149 2001 FFP1
Description Flat fold, disposable mask with adjustable twin head straps. Individually sealed in hygienic pack. Offers nominal protection factor of 4 x OEL. Protects against large hazardous dust particles, light dust areas, and fine non toxic dusts.

1/Box of 20

R0470



Respair 1 Valved Disposable Mask

Standard EN149 2001 FFP1
Description As Respair 1 but with an exhalation valve for easier breathing and the reduction of heat and condensation build up .

1/ Box of 10

R0470/V



Respair 2 Disposable Mask

Standard EN149 2001 FFP2
Description Flat fold disposable mask with adjustable twin head straps. Individually sealed in hygienic pack. Offers a nominal protection factor of 12.5 x OEL. Protects against fine hazardous particles and light welding fumes.

1/ Box of 20

R0475



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Respiratory Protection

Respair 2 Valved Disposable Mask

Standard EN149 2001 FFP2

Description As Respair 2 but with an exhalation valve for easier breathing and the reduction of heat and condensation build up.

1/ Box of 10

R0475/V



Respair 3 Valved Disposable Mask

Standard EN149 2001 FFP3

Description Flat fold, disposable mask with adjustable twin head straps. Individually sealed in hygienic pack. Offers a nominal protection factor of 50 x OEL. Protects against fine dusts, oil and water based mists and fumes. Supplied with an integral exhalation valve for easier breathing and the reduction of heat and condensation build up.

1/ Box of 10

R0480/V



Odorair 2 Valved Disposable Mask

Standard EN149 2001 FFP2

Description Flat fold, charcoal based, disposable mask. Individually sealed in hygienic pack. Offers a nominal protection factor of 12.5 x OEL. Protection against odours and organic vapours. Supplied with an exhalation valve for easier breathing and the reduction of heat and condensation build up. Ideal for use against wood dust, asbestos, lead welding fumes and organic vapours.

1/ Box of 10

R0485



Silner 12 Half Mask

Standard EN140

Description Twin filter half mask. Offers a nominal protection factor of 50 x OEL. The twin filter design allows for a balanced anatomical face fit, an excellent seal around the nose and low breathing resistance. Provides for a wide field of vision and incorporates an easy to use reliable harness. The gas and particle filters available provide excellent protection in the most demanding environments.

R030580



Respiratory Protection



◀ Combined Filter Silner 12

Standard EN141 A1B1E1K1
Description For use with the Silner 12 half mask. Protects against organic gases and vapours (with boiling point greater than 65° C), inorganic gases and vapours, acid gases and vapours and ammonia.

1 Pair/10 Pairs/Pack

R042477



◀ 91P3 Particle Filter

Standard EN143 P3
Description Particle filter offering protection against solid and liquid toxic particles. For use with Silner 12 half mask.

1 Pair/10 Pairs/Pack

R051691



◀ Sari Full Face Mask

Standard EN12942, EN136
Description Panoramic, full view for mask with a large visor offering effective protection of the respiratory system and face against harmful gases and vapours whilst maintaining a wide field of vision in all directions. Incorporates a speech diaphragm to facilitate verbal communication. Offers nominal protection factor of 1,000 x OEL with particle filters and 2,000 x OEL with gas filters. Available as special order with Triplex glass solvent resistant visor (order code R011706). A full range of spare parts, including prescription spectacle frames, available - contact Technical Sales on 1850 303 304 for details.

R011680



◀ Promask Full Face Mask

Standard EN12942, EN136
Description New generation, full face mask. Designed to protect the respiratory system and face against hazardous gases and particles. Offers excellent field of vision. Extremely comfortable fit with excellent face seal. Constructed from hypo allergenic silicone. Side fitting thread for filters or air supply hose allows for minimal inconvenience in normal wear. Offers nominal protection factor of 1,000 X OEL with particle filters and 2,000 X OEL with gas filters. A full range of spare parts including prescription spectacle frames available - contact Technical Sales on 1850 303 304 for details.

R012681



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Respiratory Protection

Combined Filter

Standard EN141, EN143 A2B2E2K2P3

Description Most commonly used filter in industry. Large capacity. Protects against organic vapours and gases (with boiling point greater than 65° C), inorganic and acid gases and vapours, ammonia and organic ammonia derivatives, solid and liquid particles, radioactive and toxic particles, bacteria and virus.

1/20 per box

R042799



105P3 Filter

Standard EN141 P3

Description Particle filter for the Sari and ProMask full face masks and Scott powered respirators. Offers protection against solid and liquid particles, radioactive and toxic particles, bacteria and virus.

1/20 per box

R052670



AXP3 Filter

Standard EN371, EN143

Description Protects against organic gases and vapours (with boiling point less than 65°C), gas, and solid and liquid particles, radioactive and toxic particles, bacteria and virus.

1/20 per box

R042770



Sari Carrying Case

Description Hygienic, personal carrying case for Sari facemask and filters.

R010185



Auto flow Powered Respirator

Standard EN146

Description Advanced powered respirator for use with a range of standard Scott filters. Rechargeable, NIMH battery provides 4 - 8 hours use, depending on filter combination and flow rate. Accepts various facepieces including half masks, full face masks, air hoods and auto mask. Face pieces and filters supplied separately.

R062936



Respiratory Protection



◀ Proflo 2 EX Powered Respirator

Standard EN 146

Description New generation powered respirator. NiCad rechargeable battery pack. Equipped with microprocessor controlled air-flow management system for faultless operation and accurate, quick air stream regulation. Built-in control system continually monitors the status of the power pack and adjusts the air-flow rate. Intrinsically safe for use in hazardous areas. Modular unit accepts standard Scott filters and integrates with a wide range of face pieces. Face pieces and filters supplied separately.

R063782



◀ Automask

Standard EN12492

Description Multipurpose, lightweight face shield providing a high degree of comfort. Can be used comfortably with spectacles and helmet. Integrates with Scott powered respirators. (For use with airline equipment, order product code R063270. Supplied with air supply hose to enable connection to the flow control valve R062580.)

R063080



◀ Automask Litehood

Standard EN12941

Description Offers full head and neck cover, as well as excellent facial protection. Applications range from the medical industry to agriculture. Must be used in conjunction with the Automask, (order code R063080). For use with airline equipment, order product code R063271 (supplied with air supply hose to enable connection to the flow control valve R062580).

R063098



◀ Two Man Filtering Unit

Description Two man, compressed airline filtering unit. For connection to an air supply (minimum flow/pressure quality requirements). Will remove nuisance odors, oils and particles to produce breathing quality air. For operation, requires air supply hose assembly, flow control valve and face piece. - Telephone Technical Sales on 1850 303 304 for details.

R064003



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Respiratory Protection

Airline Supply Hose Assembly

Standard EN139

Description For connection between an airline filter unit and Scott flow control valve. 10m in length 30m length available on special order (product code 061130).

R061110



Flow Control Valve

Standard EN139

Description Compressed airline continuous flow device. Allows for connection to the compressed air supply via the compressed air hose. The flow control valve with waist belt allows the user to regulate the airflow between 120 to 300 l/min to ensure optimum comfort. Designed to work in conjunction with various Scott face and head pieces.

R062580



Kesaf Airline Connector

Standard EN139

Description For use with the Scott airline system. Allows for connection between the flow control valve and Sari or Promask full face mask.

R062381



Silair

Description Compressed airline lightweight half mask. Based on the Silner 12 design. Lightweight. Connected by a breathing tube (supplied with the mask) to the flow control valve (R062580). Can be worn in conjunction with various face shields.

R062580



Respiratory Protection



◀ HEAD 10

Standard EN401

Description Replacing conventional, awkward compressed air escape sets, the HEAD 10 is a lightweight, 10 minute, hooded chemical oxygen escape set. Offers a simple, effective and safe means of escape, designed to provide maximum wearer protection. Considerable savings in terms of service requirements.

R80200002



◀ PhD Lite Gas Multi Detector

Description A compact and sturdy portable detector unit. Measures predetermined atmospheric hazards simultaneously and continuously. With a choice of up to 4 combined sensors on the unit, the most common configuration includes, but is not limited to, Oxygen, LEL (Methane), Carbon Monoxide and Hydrogen Sulphide. Contact Technical Sales for details on 1850 303 304.

Special Order



◀ Mighty Tox 2

Description Once activated, the Mighty Tox 2 detector monitors gas levels and oxygen levels continuously for a period of 24 months. A built-in test button on the back of the instrument actuates the monitor, and allows for diagnostics and confirmation of service life left. Contact Technical Sales for details on 1850 303 304.

Special Order



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Standards

SELECTION GUIDE

The selection of respiratory protection follows a basic four-step method:

- **Identify the hazards** - dust, metal fume, gas, vapour.
- **Quantify the hazards** - measure the hazard levels.
- **Select the appropriate respirator** - disposable, half mask, full face, powered, airline.
- **Train users in fitting and use** - to optimise respiratory protection via training in fitting and use.

Anderco can provide full on site training and assistance in implementing a respiratory protection programme, tailored to your specific requirements.

IDENTIFY THE HAZARDS

Dusts - produced when solid materials are broken down into finer particles. The longer the dust remains in the air the easier it is to inhale.

Mists - tiny liquid droplets formed by atomisation and condensation processes such as spraying. Mists are often combinations of several hazardous ingredients.

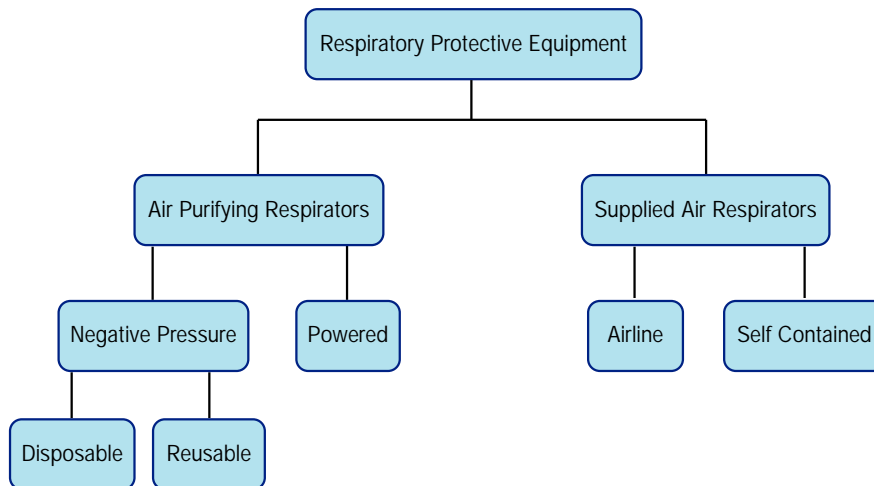
Metal Fumes - occur when metals are vaporised under high heat. The vapour is cooled quickly and condenses into very fine particles that float in the air.

Gases - airborne at room temperature. Capable of diffusing or spreading freely, gases can travel very far and very quickly.

Vapours - gaseous state of substances that are liquids or solids at room temperature. Vapours are formed when substances evaporate.

TYPES OF PROTECTORS AVAILABLE

Each type of Respiratory Protective Equipment (RPE) has specific limitations which dictate its application. RPE is tested to relevant European standards which determine the product performance.



Selection Guide

FILTERS

All filters sold within the EU, regardless of manufacturer, must use the following colour coding system as part of their label.

Filter Markings

For use against	Filter Type	Colour Code	Main Applications
Gas & Vapour (EN 141 & EN 405)	A	Brown	Organic Gases/Vapours with boiling point greater than 65°C
	B	Grey	Inorganic gases and vapours e.g. Chlorine (not carbon Monoxide)
	E	Yellow	Acid gases and vapours, e.g. Sulphur Dioxide, Hydrogen Chloride
	K	Green	Ammonia and organic ammonia derivative
	P	White	Particulate
Particles (EN 143 & EN 149)	P1	White	Protection against particulates in concentrations up to 4 x OEL
	P2	White	Protection against particulates in concentrations up to 12 x OEL
	P3	White	Protection against particulates in concentrations up to 50 x OEL
Gas & Vapour (EN 371)	AX	Brown	Certain organic compounds with boiling points less than 65°C

The service life of a filter will depend on -

- Concentration and characteristics of the workplace contaminant
- Filter capacity, i.e. filter class
- Breathing volume and work rate
- Air humidity
- Atmospheric temperature

The lifetime of a gas filter can be roughly calculated by comparing the concentration of workplace contaminant with the minimum breakthrough times permitted for the filter and extrapolating equipment.

Particle filters do not wear out, they get clogged with particles and moisture. This results in increased breathing resistance. A particle filter must be changed when breathing becomes burdensome.



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Respiratory Protection

RESPIRATORY PROTECTION STANDARDS

Respirators are tested to the relevant European Standards and CE marked. All respirators carry the CE mark plus the European Standard and performance category markings.

EN132	Respiratory protective devices, definition of terms and pictograms.
EN133	Respiratory protective devices, classification.
EN134	Respiratory protective devices, nomenclature of components.
EN135	Respiratory protective devices, list of equivalent terms.
EN136	Full face pieces.
EN137	Filters against organic low boiling point compounds.
EN138	Fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece assembly.
EN139	Compressed airline breathing apparatus for use with a full face mask, half mask or mouthpiece assembly.
EN140	Half mask face pieces.
EN141	Gas and vapour filters.
EN142	Mouthpiece assemblies.
EN143	Particulate filters.
EN144	Gas cylinder valves – thread connections for insert connector.
EN145	Self contained closed circuit breathing apparatus, compressed oxygen or oxygen nitrogen.
EN146	Powered respirators - hoods and helmets.
EN147	Powered full face masks.
EN148	Threads for face pieces.
EN149	Filtering face piece particulate respirators.
EN269	Powered fresh air hose breathing apparatus, incorporating a hood.
EN270	Compressed airline apparatus incorporating a hood.
EN271	Compressed airline powered fresh air hose breathing apparatus, incorporating a hood for abrasive blasting.
EN371	Gas and/or combined filters for use against low boiling point organic compounds.
EN372	Filters against specific named compounds.
EN400	Self contained, close circuit compressed oxygen escape apparatus for self rescue.
EN401	Self contained, close circuit compressed chemical oxygen apparatus for self rescue.
EN402	Self contained, close circuit compressed air with full face mask or mouthpiece assembly.
EN403	Filtering devices with hoods for self rescue from fire.
EN404	Self rescue filter requirements.
EN405	Valved filtering half mask respirators for gases and particulates.
EN1061	Self contained close circuit breathing apparatus – chemical oxygen self rescue escape apparatus.
EN1146	Self contained open circuit breathing apparatus incorporating a hood (compressed air escape apparatus with hood).
EN1827	Half masks without inhalation valves and with separable filters to protect against gases/particles.
EN1835	Light duty supplied air.
EN12021	Compressed air for breathing apparatus.
EN12083	Filters with breathing hoses.
EN12419	Light duty construction compressed airline breathing apparatus, incorporating a full face mask, half mask or a quarter mask.
EN12941	Powered respirators - hoods and helmets (as EN 146 rev. but also requires a low flow indicator).
EN12942	Powered respirator full face masks.
EN13274	Determination of inward leakage and total inward leakage.



Respiratory Protection

Occupational Exposure Limits (OEL)

This is a guide to the maximum amount of safe exposure to a substance permissible over a particular period, without suffering and adverse effects. Many large organisations will set their own OEL, however regulatory bodies impose statutory OEL for a number of substances. In Ireland we can make reference to a guidance document from the UK's Health and Safety Executive - EH40. This guide is updated annually with various revisions as further studies are conducted and new information comes to light.

Maximum Exposure Limits (MEL)

Exposure should be reduced as far below the MEL as is practicable and should not exceed the MEL when averaged over the specified reference period.

OEL Reference Periods

There are two reference periods for which OELs may be set: 8 hour Time Weighted Average (TWA) and 15 minute Short Term Exposure Limit (STEL). A substance may be assigned OELs at either one or both reference periods.

- 8 hour TWA - some adverse health effects can occur after prolonged or accumulated exposure. The 8 hour TWA is set to restrict the total intake by inhalation over one or more shifts.
- 15 minute STEL - Some adverse health effects may be experienced after short exposures. 15 minute STEL may be applied to control these effects. For a substance assigned a 15 minute STEL MEL, this level of exposure should never be exceeded.

Immediately Dangerous to Life or Health (IDLH)

The IDLH concentration of a substance is defined as "exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment". The IDLH value represents a maximum concentration from which a worker would escape within 30 minutes without any harmful symptoms or irreversible health effects.

Odour Threshold

The concentration of a substance at which the majority of individuals can smell or taste it.



Respiratory Protection

PROTECTION FACTORS

This is the method by which we can quantify the effectiveness of a particular respiratory protective device. Here we use the Nominal Protection Factor (NPF), which is derived from the performance categories of the European standards to which all respirators are tested.

A GUIDE TO OCCUPATIONAL EXPOSURE LIMITS (OEL)

The measured airborne concentration of a respiratory hazard is established by workplace monitoring. The value must be compared to a reference figure to determine whether actions are required to reduce exposure. The reference figure is usually the relevant Occupational Exposure Limit (OEL). If the respiratory hazard is above the OEL, various control measures should be considered.

EXAMPLE

If products containing the solvent Toluene are in use, the exposure to Toluene vapour needs to be established by monitoring. Toluene is listed in EH 40 with an Occupational Exposure Limit of 50ppm (parts per million).

If the measured level at the workplace is above 50ppm, a control measure needs to be used to adequately reduce the exposure to Toluene vapour. The control measures can include improving general ventilation, extraction systems and respiratory protective equipment.

RPE SELECTION CALCULATION

Air monitoring is required to measure respiratory hazard levels in the workplace. The hazard level is then compared to the Occupational Exposure Limit (OEL) to determine the required respirator performance.

EXAMPLE

Woodworking

1. Measured Respiratory Hazard Level (wood dust) = 70mg/m₃
2. Occupational Exposure Limit (OEL) = 5mg/m₃

Divide 1 by 2 $70/5 = 14 \times \text{OEL}$.

Respiratory Hazard level = 14 times OEL.

Assuming all other control measures have been considered, select a respirator with an NPF greater than 14 x OEL. e.g. Respir 3V - EN149 2001 FFP3 - NPF: 50 x OEL.



Respiratory Protection

ACCESSORIES

There is a wide range of accessories and spare parts including specialised carrying cases, sanitising tissues, and decontamination covers for blower units is available. For full details on available accessories consult the product user manual supplied with the item or telephone our Technical Helpdesk on 1850 303 304.

CARE & MAINTENANCE

The requirements of a care and maintenance programme vary depending on the type of equipment used. Details should be clearly specified with the accompanying instructions.

Most devices will follow a procedure which includes a pre-use visual inspection and possibly a fit-test or in the case of a supplied air unit, a flow check to ensure the appropriate amount of air is being delivered. The procedure may include cleaning and disinfecting. A regular maintenance program monitored by a competent person should be in place, and include leak and performance checks and replacement of parts such as exhalation valves. A service history should be maintained.

CORPORATE IDENTIFICATION

The respiratory product range does not normally have a requirement for end user branding and consequently there is little available. Customised carrying cases/storage units may be supplied. Disposable respirators may be branded, however this is dependent on significant minimum order quantities.



SALES HOTLINE: 1850 303 304



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Disclaimer re. technical standards and requirements - Whilst every endeavour has been taken in the preparation of this catalogue, details of technical standards and operational hazards are provided for general information only. Customers should satisfy themselves as to the applicable technical standards and their specific workplace requirements by obtaining specialist advice prior to the placement of any order for products.

Disclaimer on description of products - Whilst every endeavour has been taken in the preparation of this catalogue, descriptions, measurements, quantities and illustrations are intended to convey a general description of the products mentioned and should not be relied upon as statements of fact and same form no part of any subsequent Contract for Sale. Any intending customer requiring the products should satisfy themselves by inspection or otherwise as to the correctness of the description given to each product. In respect of the suitability of products for customers individual requirements, customers should obtain specialist advice prior to the placement of any order.