# Dräger





A mask for every task. Dräger X-plore® Twinfilter Series.



# Dräger X-plore® Twinfilter Masks – Comfort and Safety

If you combine Dräger's extensive knowledge in respiratory protection technology with the sound practical knowledge of industrial and trade users, the result is an innovative respirator series excelling in wearing comfort and versatility: the Dräger X-plore® Twinfilter Series. Two half masks (X-plore® 3300 and X-plore® 3500) and one full face mask (X-plore® 5500) are usefully complemented by a wide range of bayonet filters offering suitable protection for many applications. The modern, compact design and swept back position of the filters ensure unrestricted vision, making the Dräger X-plore® Twinfilter masks an ideal companion during daily work or periodic use. Special highlights include many accessories to individualize the mask/filter combination for your specific application.



#### Dräger X-plore® 3300

A durable economical half mask. The right choice for anyone requiring affordable and comfortable respiratory protection.

#### Dräger X-plore® 3500 (shown)

A comfortable half mask for long-term use in demanding environments. This light-weight half mask was efficiently designed with minimal components to make clean-up and maintenance simple.





Combined with triple sealing edges, it provides secure protection and tight fit for almost every face shape – in one mask!

#### 5-Point Head Harness

Provides fast and simple donning/doffing of the mask without catching and pulling on the hair.



Made from polycarbonate or Triplex glass offering greater than 90% of normal vision for ideal visibility while working. The Triplex material is characterized by high scratch, chemical and temperature resistance.

#### Dräger X-plore® 5500 (Triplex shown)

The ideal full face mask for comprehensive respiratory and eye protection. Developed on the basis of proven and reliable technology.

## The Dräger X-plore® Twinfilter masks combine the highest levels of flexibility, safety and comfort:

- Carefully selected materials for durability and extended daily use
- Mask design utilizes very few parts which helps keep the weight down and makes clean-up a breeze
- Quick and easy 1/4-turn bayonet style cartridge attachment
- Uniform weight distribution thanks to uniquely designed head harnesses
- The compact low-profile design ensures a wide, unobstructed field of vision

#### **OVERVIEW OF MASKS**

Masks	Size	Part No.
Dräger X-plore® 3300	S	R 55 331
	M	R 55 330
	L	R 55 332
Dräger X-plore® 3500	S	R 55 351
	M	R 55 350
	L	R 55 352
Dräger X-plore® 5500	Polycarbonate Lens, universal size	R 55 270
	Triplex Lens, universal size	R 56 655

### **Particulate Filters**

Where dusts or aerosols arise – a particulate filter provides perfect respiratory protection. Since filters are divided into different classes, the particulate of concern, and sometimes the concentration level, must be identified in advance. In addition, certain "hazardous" particles may require a higher filter rating to be used. Some filters utilize an activated carbon impregnated into the media to protect against nuisance levels of vapors and gases. The filter classes are as follows:

Filter Class	Meaning
N - non-oil resistant	not for use in atmospheres containing oil
R - oil resistant	cannot use longer than 480 min, or one work shift,
	in atmospheres containing oil
P - oil proof	can be reused in atmospheres containing oil
Efficiency Rating	
95%, 99%, 99.97% (100)	when tested against particles 0.3 microns in size

95

99

100

### Dräger X-plore<sup>®</sup> Pure Filter: Low-Profile Particulate Filters

- Light-weight and flexible
- Teardrop shape provides unrestricted view
- Low-profile design allows fit under visors
- Large surface area permits long service life with low breathing resistance
- Can be used alone or in combination with gas cartridges
- Nuisance odor¹ version available for control against organic vapors/acid gases

#### Particulate Filter Pads

- Versatile use: can be used alone or in combination with gas cartridges
- Economic solution for frequent filter replacement

#### Course Particulate Filter Pads

- A unique pre-filter used to extend the life of our combination cartridges
- Removes heavy particulates before entering the P100 filter

#### **OVERVIEW OF PARTICULATE FILTERS**

Filter Type	Filter Class	Qty/Bx	Part No.
Dräger X-plore® Pure	P100	20	67 383 50
Dräger X-plore® Pure Odor	P100 OV/AG	20	67 38 392
Particulate Filter with housing	P100	22	67 408 30
Particulate Filter Pad	N95	20	67 380 20
	R95	20	67 380 21

## Gas and Vapor Cartridges

Gases and vapors are often invisible, odorless and tasteless. Therefore, it is especially important to wear the correct respiratory protection when working with hazardous substances. To ensure you are properly protected, at a minimum you must know what hazards are present, their concentration levels and when to change the cartridges. Cartridges are available for protection against a single gas family or many gas families in one. The gas cartridges are identified by a color code for easy and quick identification, as well as abbreviations for gas names.

#### FILTER COLOR CODES

Color Code	Filter type	Contaminants present
	OV	Organic Vapors
	AG	Acid Gases: e.g. chlorine, hydrogen chloride,
		sulfur dioxide
	OV/AG	Organic Vapors / Acid Gases
	AM/MA	Ammonia / Methylamine
	MV	Mercury Vapor
		Multi-Gas and Vapor, Special Use
	P100	Particles

#### CHEMICAL ABBREVIATIONS

OV = Organic Vapors	FM = Formaldehyde
AG = Acid Gases	CD = Chlorine Dioxide
CL = Chlorine	AM = Ammonia
HC = Hydrogen Chloride	MA = Methylamine
SD = Sulfur Dioxide	HS = Hydrogen Sulfide
HF = Hydrogen Fluoride	PH = Phosphine

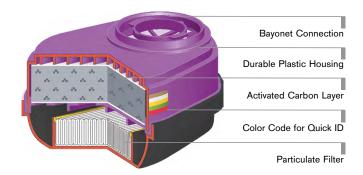
#### Benefits of the Dräger X-plore® bayonet gas cartridges include:

- Low-profile, swept-back design provides unrestricted visibility
- Large surface area lowers breathing resistance
- Minimum shelf-life of 4 years
- Many options and accessories available

#### **OVERVIEW OF GAS CARTRIDGES**

Qty/Bx	Part No.
20	67 38 024
20	67 38 025
20	67 38 027
20	67 38 351
	20 20 20

## **Combination Cartridges**



In many applications particles, gases and vapors occur simultaneously. In such cases combination cartridges are used. Combination cartridges consist of an activated carbon to filter gases and vapors, with a non-replaceable upstream filter for particulates. For both filtering components the same classes and designations apply as for the individual gas or particulate filters.

Ready-to-use combination cartridges are available when complete protection is necessary. In heavy particulate environments when changing of the filter would be more frequent than changing the cartridge, options are available to attach a replaceable filter to a chemical cartridge by means of an adapter – an economical solution. When preparing a change-out schedule, calculate service life for both components and change the cartridge based on the shorter time. Benefits of the Dräger X-plore® combination cartridges include:

- Compact and light-weight
- Durable plastic housing
- Swept-back design minimizes obstruction to field of view
- Just line up the indicator marks, give a quick ¼-turn in the direction of the arrow and the cartridges are ready for use
- Optional pre-filter prevents fast clogging of the particulate filter with coarse dust, thus extending its service life

#### **OVERVIEW OF COMBINATION CARTRIDGES**

Cartridge Type / Protection	Qty/Bx	Part No.
OV/P100	14	67 38 034
OV/AG/FM/CD/HF/P100	14	67 38 035
AM/MA/P100	14	67 38 037
OV/AG/HF/FM/CD/AM/MA/HS/P100	14	67 38 361

## **Accessories and Combination Options**

Flexibility, comfort and economic value are important success factors in industry and trade. Modularity of the Dräger X-plore® bayonet series gas and particulate filters provides you with the ability to customize your mask/filter combination to your specific needs, even as they change. Adaptability makes the Dräger X-plore® series a perfect solution no matter what the application.

#### **ACCESSORIES**

Description	Qty/Bx	Part No.
Dräger X-plore® Pure Adapter	10	67 38 356
Coarse Particulate Pre-Filter	40	67 38 159
Coarse Particulate Pre-Filter Retainer	14	67 37 576
Pre-Filter Pad Retainer	12	67 38 038
Pre-Filter Pad Base	12	67 38 039

The following diagram shows the modularity of the X-plore® cartridge series.

#### **COMBINATION OPTIONS**

Pre-Filter Pad as a Stand-Alone Filter

Retainer Filter Pad N95 or R95 Base Pre-Filter Pad in Combination with Gas Cartridge

Retainer
Filter Pad N95 or R95
Gas Cartridge

Pure in Combination with Gas Cartridge



Combination Cartridge with Coarse Particulate Pre-Filter



## Selecting the Appropriate Respiratory Protection

Selecting the appropriate mask/cartridge/filter combination is extremely important to ensure that you are properly protected throughout the work day. The information contained in this brochure should only be used as guidelines and should not be used as a substitute for local/federal regulations or worksite specific conditions. Additional information can be found in the product instruction manual or on your regulating agency's (e.g. OSHA, CSA, Norma Oficial Mexicana) website.

## Do not use an Air Purifying Respirator under the following conditions:

- In atmospheres containing less than 19.5% oxygen
- If type of contaminant or concentration is unknown
- In an IDLH (Immediately Dangerous to Life or Health) atmosphere
- If concentration is unknown, assume IDLH

If any of these conditions exist, you must use an appropriate supplied air respirator.

#### Basic information needed for selection:

- Know what type of hazards are present
- Concentration levels
- Assigned Protection Factor (APF): expected level of protection from a particular class of respirators – OSHA 1910.134

These items can be determined using one of Dräger's gas detection instruments from our comprehensive line, MSDS, product label, etc. Once this information is known, an excellent resource to determine respirator type is to refer to the NIOSH Pocket Guide to Chemical Hazards (www.cdc.gov/niosh/npg). This guide lists the Permissible Exposure Limits (above this level respiratory protection is required), type of respiratory protection required, IDLH level, if eye irritant, if carcinogen, special instructions, etc.

#### Mask Selection

Select mask type based on its Maximum Use Concentration (MUC = APF x PEL), of course not exceeding the IDLH level, and determine if eye protection is necessary. In addition, check NIOSH Pocket Guide for substance specific guidelines.

#### Filter/Cartridge Selection

First check the NIOSH Pocket Guide and follow any special instructions for the substance of concern.

- Filters should be selected only when particles (solid or liquid) are present. If oil is present, then use an "R" or "P" version. N95 offers the minimum approved protection; P100 provides the maximum approved protection.
- Single Gas Cartridges should be selected only when gases or vapors from one particular family are present.
- Multi-Gas Cartridges should be selected when gases or vapors from more than one family are present, or to reduce logistics when one cartridge is preferred in different areas containing different substances. Typically, multi-gas cartridges will last half as long as single gas cartridges.
- Combination Cartridges should be selected when gases/vapors and particulates are present.

## Cartridge / Filter Service Life

A commonly asked question is "How long will my cartridges last?" Unfortunately, this is not a simple question to answer as many factors are involved, such as:

- Concentration level
- Temperature
- Humidity
- Worker breathing rate
- Cartridge capacity
- Improper storage

Service life is the length of time a filter/cartridge will effectively remove contaminants and begins the moment the cartridge is removed from its original sealed packaging. Knowing when to change your cartridges is very critical in ensuring you are properly protected, not to mention that it is required by OSHA in 1910.134. The information shown here is only intended to be used as a guideline. You should consult an experienced professional familiar with your worksite specific conditions for accurate data.

#### There are basically four ways to estimate service life:

- Conduct experimental tests
  - Having used cartridges tested at various times will produce the most accurate and reliable results
- Use manufacturer's data
  - Very accurate cartridge data, but not specific to worksite conditions

#### - Use a math model

- Inexpensive, easy, but conservative and only available for organic vapors
- End of Service Life Indicator on cartridge
  - Currently not available for all cartridges or gases

#### **Filters**

- N-Series: Can be reused, but limited by considerations of breathing resistance, hygiene and/or damage.
- R-Series: Cannot be used for longer than one 8-hour work shift when oil is present. If no oil, then follow N-Series guidelines.
- P-Series: Can be reused, but limited by considerations of breathing resistance, hygiene and/or damage.

#### Cartridges

- Obtain information noted above and choose one of the described methods.
- Dräger offers service life graphs for its cartridges.
- Refer to OSHA and NIOSH for specific guidelines on certain substances

#### Combination Cartridges

 Follow guidelines for filters and cartridges and use the shorter of the two.

## **Mask Accessories**

Dräger understands that the mask and cartridges are only part of the solution, which is why we offer a wide range of accessories to compliment our portfolio. From welding shields to spectacle kits, to lens protectors, to fit testing, chances are that Dräger can provide you with an accessory to meet your exact needs.

#### **ACCESSORIES**

Description	Part No.
Alcohol Free Wipes, box of 100	40 53 845
Anti-Fog Gel Solution, 50ml	R 52 560
Anti-Fog Spray Solution, 100ml	R 21 120
Lens Overlay Protectors, 25/pkg	40 55 092
Welding Shield, accepts 4.5" x 5.25" glass	40 53 437
(only fits masks with steel lens frame)	
Stainless Steel Lens Frame, complete	R 23 117
Triples Glass Lens	R 26 989
Carrying/Storage Bags	
Full Face, Yellow Nylon with Belt Loops	40 53 847
Full Face, Blue Nylon with Draw String	40 55 785
Full Face, Black Hard Plastic	R 51 019
Half Face Mask, Yellow Nylon	40 55 649
Spectacle Kits	
Standard Kit for Dräger X-plore® Full Face	R 51 548
Fit Testing	
Dräger X-plore® 3300/3500/5500 PortaCount Adapter	67 38 979
Dräger X-plore® 3300/3500/5500 OHD Adapter	40 57 023
Quantifit Fit Tester w/o printer	40 58 635
Bitrex™ Fit Test Kit, complete	40 55 625
Bitrex™ Fit Test Solution, 6 ampules	40 55 624
Bitrex <sup>™</sup> Sensitivity Solution, 6 ampules	40 55 623
Irritant Smoke Fit Test Kit, complete	40 53 844
Irritant Smoke Tubes, quantity of 6	40 54 811



Welding Shield



Spectacle Frame



**Quantifit Fit Tester** 



Bitrex™ Fit Test Kit



**Alcohol Free** Wipes



Half Mask Storage Bag

#### Paint Work



Health risks from organic solvents, isocyanates and particles during the spraying of paints are frequently underestimated today. However, they can have long-term health risks even if they are not diagnosed until after 10 to 15 years. Don't let it get that far – use the correct respiratory protection!

#### **USE**

Removal	Contaminants	Filters
Sanding, grinding, scraping	Particles	N95
Paints containing lead	Lead particles	P100
Solvent based stripping	Solvent vapors,	OV + N95
	particles	
Methylene Chloride based strippers	Vapors, particles	Supplied air
Cleaning	Contaminants	Filters
Ammonia solution	Ammonia vapors,	AM + N95
	aerosols	
Paint thinners	Solvent vapors,	OV + N95
	aerosols	
Pointing / Cooting	Contominanto	Eiltoro
Painting / Coating	Contaminants	Filters
Water soluble paint	Fine paint aerosols	OV + N95
Water soluble paint Paints containing solvents,	Fine paint aerosols Solvent vapors,	
Water soluble paint	Fine paint aerosols	OV + N95
Water soluble paint Paints containing solvents,	Fine paint aerosols Solvent vapors,	OV + N95
Water soluble paint Paints containing solvents, synthetic enamel, bleach	Fine paint aerosols Solvent vapors, aerosols	OV + N95 OV + R95
Water soluble paint Paints containing solvents, synthetic enamel, bleach Wood coatings containing copper,	Fine paint aerosols Solvent vapors, aerosols	OV + N95 OV + R95
Water soluble paint Paints containing solvents, synthetic enamel, bleach Wood coatings containing copper, chrome or arsenic	Fine paint aerosols Solvent vapors, aerosols Pine paint mist	OV + N95 OV + R95 P100
Water soluble paint Paints containing solvents, synthetic enamel, bleach Wood coatings containing copper, chrome or arsenic Latex paint	Fine paint aerosols Solvent vapors, aerosols Pine paint mist Aerosols	OV + N95 OV + R95 P100
Water soluble paint Paints containing solvents, synthetic enamel, bleach Wood coatings containing copper, chrome or arsenic Latex paint Latex paint with residual solvents	Fine paint aerosols Solvent vapors, aerosols Pine paint mist  Aerosols Solvent vapors,	OV + N95 OV + R95 P100
Water soluble paint Paints containing solvents, synthetic enamel, bleach Wood coatings containing copper, chrome or arsenic Latex paint Latex paint with residual solvents or odors	Fine paint aerosols Solvent vapors, aerosols Pine paint mist  Aerosols Solvent vapors, aerosols	OV + N95 OV + R95 P100 N95 OV + N95
Water soluble paint Paints containing solvents, synthetic enamel, bleach Wood coatings containing copper, chrome or arsenic Latex paint Latex paint with residual solvents or odors	Fine paint aerosols Solvent vapors, aerosols Pine paint mist  Aerosols Solvent vapors, aerosols Solvent vapors,	OV + N95 OV + R95 P100 N95 OV + N95

#### SPECIAL SOLUTIONS FROM DRÄGER

#### Course Particulate Pre-filter

- Prevents the fast clogging of the P100 filter on combination cartridges
- Individually replaceable, thus extending service life of the P100 filter

#### Gas/Vapor Cartridge + N95/R95/P100 Pre-filter

- A cost effective alternative to a stacked combination cartridge
- Pre-filter can be replaced independent of the gas cartridge

#### Full Face Mask (with Triplex Lens)

 The Triplex glass lens on the Dräger X-plore® 5500 offers optimum chemical and temperature resistance in harsh environments

#### Lens Overlay Protectors for Full Face Mask

- Protects the lens of the full face mask against scratching or contaminants
- Easy removal and disposal

## **Metal working**

The activities in metal working are versatile. Whether you drill, grind, saw, weld, solder or glue: hazardous gases and particles pose a risk for the respiratory organs. The half and full face masks of the Dräger X-plore® Twinfilter series are a good choice for all applications. Dräger X-plore® masks provide suitable protection across many applications.

#### **USE**

Grinding/Cutting/Drilling	Contaminants	Filter
Iron, steel, stainless steel	Fine metal particles	N95
Lead	Fine metal particles	P100
Copper, chrome, aluminum	Fine metal particles	N95
Welding - Metal Fumes	Contaminants	Filter
Aluminum, steel, stainless steel,	Vaporized metal	N95
galvanized steel		
Cadmium, lead, stainless steel	Vaporized metal	P100
containing chrome		
Welding – Gases	Contaminants	Filter
Ozone	Gas	P100 Odor (at
		levels below PEL
		<ul><li>not NIOSH</li></ul>
		approved for
		ozone)
Carbon monoxide, carbon dioxide,	Gas	Supplied air
nitrous oxides, phosgene		
Soldering and Brazing	Contaminants	Filter
Most metals	Metal fumes	N95
Most flux	Vapors	OV + N95

#### SPECIAL SOLUTIONS FROM DRÄGER

#### Welding Lens Attachment

- For the full face mask Dräger X-plore® 5500 with stainless steel frame
- Accepts standard 4.5" x 5.25" glass, including most auto-darkening lenses

#### Dräger X-plore® Pure P100 Odor

- A P100 filter with nuisance odor protection against organic vapors, acid gases and ozone
- Large surface area reduces breathing resistance and extends service life
- Low profile design allows fit under most welding helmets

#### Woodwork

Most people recognize the obvious hazards in woodworking such as sharp tools, flying particles into eyes, loose clothing or long hair, but the not so obvious hazards can also have long term health effects. Things such as wood dust, toxic solvents and adhesives, mold and fungus, saps and oils, chemical additives, also require proper protection. Just a few minutes of steady hand sanding can generate concentration levels above the PEL. Whatever your activity may be, let Dräger show you that we have the mask for your task.

#### **USE**

Paint Removal	Contaminant	Filter
Stripping using agents containing	Solvent vapors,	OV + N95
solvents	particles	
Grinding, sanding old coatings	Fine particles	N95
Grinding, sanding coatings	Fine particles	P100
containing lead, chrome, arsenic,		
copper	_	
Mechanical Working	Contaminant	Filter
Cutting, drilling, sanding	Wood particles	N95
Adhesive	Contaminant	Filter
Removing - scraping, sanding	Fine particles	N95
Applying - brushing containing	Vapors	OV
solvents		
Applying – spraying containing	Vapors, aerosols	OV + N95
solvents	_	_
Finishing	Contaminants	Filter
Staining/varnishing/painting -	Vapors	OV
brushing		
Staining/varnishing/painting -	Vapors, aerosols	OV + N95 (R95
spraying	_	if oil based)
Clean-up	Contaminants	Filter
Mineral spirits, lacquer thinner	Vapors	OV
milioral opinio, lacquer triminer	Tapolo	

#### SPECIAL SOLUTIONS FROM DRÄGER

Pre-Filter - N95, R95 or P100

- Economic alternative for all applications requiring particle protection
- The inexpensive pre-filter can be replaced without replacing entire cartridge

## Hydrogen Sulfide

Hydrogen sulfide is a toxic gas produced by the bacterial breakdown of sulfites in organic materials and has a rotten egg smell at low concentrations. Even at low levels, H<sub>2</sub>S has a negative impact on the nervous system, respiratory system and eyes. Hydrogen sulfide is derived from many sources, both man-made and natural, and also found in various industries worldwide. Dräger's new Multi-Gas + cartridge can provide you with the necessary protection in those low level (below 100 ppm) applications.

#### USE

Industry	Source	Application	
Landfills	Decaying materials	Emergency stand-by respirator,	
		drilling, suspicious load inspection	
Chemical	Reacting sulfur with	Manufacture of dyes, rubber,	
	hydrogen gas to produce	pesticides, polymers, plastics,	
	inorganic sulfides, and	leather and pharmaceuticals	
	as a by-product		
Oil & Gas	Occurs naturally in	Working around well heads, piping,	
	natural gas and crude oil	storage tanks for emergency escape,	
		maintenance, leak inspection,	
		transporting, long-term protection	
		when around low levels	
Biogas	Anaerobic fermentation	Emergency escape, maintenance,	
Ü	of manure	leak inspection, long-term protection	
		when around low levels	
Utilities	Sewers, sewage systems	Emergency escape, maintenance,	
	water treatment plants	leak inspection, long-term protection	
	•	when around low levels	
Mining	Forms naturally in	Excavating, trenching, backfilling,	
Ü	underground water and	drilling, blasting and pile driving	
	rock formation		
Shipping	Hazardous cargo	Loading/unloading, transporting,	
		inspections, maintenance, emergency	
		escape	
Pulp	Evaporating or burning	Long-term protection around pulp	
and Paper	spent pulping liquid	digesters, pulp washing, evaporating	
		and burning processes	
Steel	Coke ovens,	Long term protection for employees	
and Iron	desulfurization, slag	working around the source	
	cooling, iron smelting	(operators), maintenance, inspections,	
		emergency escape	
Tanneries	By product of converting	Long term protection for employees	
	animal hides into leather	working around the source (Liming,	
		deliming, effluent treatment),	
		maintenance, inspections, emergency	
		escape	
Tunneling	Forms naturally in	Emergency escape, maintenance	
	underground water and		
	rock formation		
Coal	Raw coal gas	Emergency escape, maintenance,	
Gasification		long-term protection when around	
		low levels	

#### SPECIAL SOLUTIONS FROM DRÄGER

#### Multi-Gas + Cartridge

- Approved for working in an H<sub>2</sub>S environment below 100 ppm providing a proper respiratory protection program is followed (OSHA 1910.134)
- Approved for a wide range of chemicals: OV/CL/HC/SD/HF/FM/CD/AM/MA/HS
- Low profile design, easy two-point bayonet connection

#### Dräger X-plore® 5500 Full Face Mask

- Three sizes in one a one size fits all concept reduces logistics and makes it easier to select the right mask
- Very durable mask with excellent resistance to chemicals and temperature fluctuations

## **Working with Particulates**

Whether on the worksite or at home, a lot of dust can be generated from routine activities. Excessive particulate inhalation over time can cause constant stress on the respiratory tract. In addition, some people may be allergic to certain particles such as pollen, mold, fungus, etc. High concentrations of dust can remain in the air around the work site for hours after the generating activity has stopped, which is why it is important to consistently wear the proper respiratory protection. Comfortable masks for long duration use is Dräger's specialty.

#### **USE**

Pouring, Spraying	Contaminants	Filter
Concrete, cement	Concrete dusts,	N95
	aerosols	
Abatement/Demolition	Contaminants	Filter
General construction materials	Drywall, wood,	N95
	concrete particles	
Those containing asbestos	Asbestos fibers	P100
Grinding/Cutting/Drilling	Contaminants	Filter
Brickwork, concrete, stone, plaster	Dust particles	N95
Brickwork, concrete, stone,	Silica fibers	P100
plaster with high silica content		
Cement	Dust particles	N95
Filler	Dust particles	N95
Finishing	Contaminants	Filter
Processing of glass and mineral fiber	Fibers and	N95
	dust particles	
Plasterwork, roof laying, tile work	Dust particles	N95
Preparation	Contaminants	Filter
Digging or moving earth	Dust particles	N95
Organic/Other Particles	Contaminants	Filter
Mold, pollen, spores	Airborne particulates	N95
Smoke	Particles	N95
Radiological, nuclear	Particles	P100

#### SPECIAL SOLUTIONS FROM DRÄGER

#### Coarse Particulate Pre-Filter

- Prevents the fast clogging of the P100 filter on combination cartridges
- Individually replaceable, thus extending service life of the P100 filter

#### Dräger X-plore® Pure P100

- Large surface area reduces breathing resistance and extends service life
- Low profile design allows fit under most welding helmets

#### Pre-Filter - N95, R95 or P100

- Economic alternative for all applications requiring particle protection
- The inexpensive pre-filter can be replaced without replacing entire cartridge

## **Dräger VOICE**



When you use respiratory protection you want to be sure that you have made the right cartridge/filter choice and are properly protected. To make the right choice the following factors must be known:

- Type of contaminant present and characteristics of the environment in which the application takes place
- Limits of use of the protection devices
- Breathing rate, temperature, humidity, etc.

To choose the right Dräger cartridge, the solution is simple: The contaminant database Dräger VOICE With Dräger VOICE we offer you the possibility to search under approximately 1,750 contaminants and their chemical properties in an online database. The special features of Dräger VOICE: In addition to properties of the substance, you receive recommendations for suitable products to measure concentrations of these contaminants (from a simple single gas measuring instrument to mobile multiple gas measuring instruments or stationary gas measuring technology), and for options to effectively protect against these substances.

Important information and notes on the handling and use of the recommended products are also included, such as manuals, product literature and related products. More than 30,000 users globally already use the contaminant database Dräger VOICE – some of them every day. Test Dräger VOICE yourself and utilize the information to see how Dräger can provide you with the perfect workplace solution!

www.draeger.com/en-us\_us/Substances



#### Warnings/Cautions/Limitations

These respirators may help to reduce exposure to certain airborne contaminants. Misuse may result in illness or death. For proper use, the wearer should read and understand all provided user instructions as part of the product packaging. Before use of these respirators, an employer (as defined by OSHA) must implement a written respirator protection program under 29 CFR 1910.134, which includes training and fit testing.

- Do not use in atmospheres containing less than 19.5% oxygen
- Do not use in Immediately Dangerous to Life and Health (IDLH) situations/atmospheres
- Be knowledgeable of the type of contaminant, concentration level and limitations prior to use
- All respirator instructions and warnings must be understood by wearer prior to use
- Do not use in situations exceeding the maximum use concentration (MUC) as established by regulations
- Follow an established cartridge/canister change-out schedule

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