

MASKENOMICS® 101

Understanding ASTM Face Mask Performance Levels

Selecting the appropriate mask for a particular procedure is a critical component of your Personal Protective Equipment (PPE) protocol. Although masks may look similar, each mask has notable differences affecting the performance and level of fluid resistance and particle filtration. Understanding the ASTM performance level of each face mask can help make the selection process easier and

ensure your mask will provide the appropriate protection to minimize the spread of potentially infectious diseases.

Medical face mask materials covered under ASTM specifications are designated as one or more of the following performance levels based on the barrier performance properties of the materials used:

ASTM F2100-11 STANDARDS

	ASTM Level 1	ASTM Level 2	ASTM Level 3
FLUID RESISTANCE, mmHg	80	120	160
BFE	≥ 95%	≥ 98%	≥ 98%
PFE, @ 0.1 micron	≥ 95%	≥ 98%	≥ 98%
DELTA P, mm H₂O/cm²	< 4.0	< 5.0	< 5.0
FLAME SPREAD	Class 1	Class 1	Class 1

What the terms mean:

FLUID RESISTANCE represents the mask's resistance to penetration by synthetic blood under pressure (mmHg). It measures the ability of a mask's material construction to minimize fluids from traveling through the material and potentially coming into contact with the wearer. The higher the fluid resistance (filtration), the better the protection.

BFE (Bacterial Filtration Efficiency) represents the percentage of aerosol particulates filtered at a size of 3 microns. It is the measure of the efficiency of the mask in filtering bacteria passing through it.

PFE (sub-micron Particulate Filtration Efficiency) represents the percentage of submicron particulates filtered at 0.1 microns. PFE is the measure of the efficiency of the mask in filtering particles passing through it. The size of the particles filtered is critical.

DELTA P (Differential Pressure) represents the pressure drop across the mask or resistance to air flow in mmH₂O/cm². This determines breathing resistance – the higher the Delta P, the less the breathability, but the better the filtration.

FLAME SPREAD is a ranking derived by laboratory standard test methodology of a material's propensity to burn rapidly and spread flames.

SOURCE: ASTM Standard specification for performance of materials used in medical face masks – F2100-11 Standard.



Crosstex makes the selection process easy with the MaskEnomics® rating system, designed to assist you in the decision making process by categorizing all Crosstex face masks by the level of filtration they provide... from minimum to maximum performance. Just look to the symbols displayed to find the appropriate level of filtration for the procedure to be performed.

Ordering Information

Description	Quantity	Ref. #	Description	Quantity	Ref. #
Isolite® Earloop			Procedural Earloop (continued)		
Blue	50/Box	GCLBL	Pink	50/Box	GCPPK
Pink	50/Box	GCLPK	Yellow	50/Box	GCPYE
Yellow	50/Box	GCLYE	Blue, Bulk Pack NEW!	100/Box	GCPBL100
Surgical Molded			Surgical Tie-on		
Blue	50/Box	GCBL	Blue	50/Box	GCS
Pink	50/Box	GCPK			
Isofluid® Earloop w/ Secure Fit® Technology			Ultra® Sensitive Earloop w/ Secure Fit® Technology		
Blue	50/Box	GCIBLSF	White	50/Box	GCFCXSSF
Lavender	50/Box	GCILVSF	Ultra® Sensitive FogFree® Earloop w/ Secure Fit® Technology		
Pink	50/Box	GCIPKSF	White	40/Box	GCFCXSF
Isofluid® FogFree® Earloop w/ Secure Fit® Technology			Ultra® Sensitive FogFree® Earloop w/ Shield w/ Secure Fit® Technology		
Blue	40/Box	GCICXBSF	White	25/Box	GCPWSSF
Isofluid® FogFree® Earloop w/ Shield w/ Secure Fit® Technology			Ultra® Earloop w/ Secure Fit® Technology		
Blue	25/Box	GCIPWBSF	Blue	50/Box	GCFCXUSF
Isofluid® Earloop			Ultra® Sensitive Earloop		
Blue	50/Box	GCIBL	White	50/Box	GCFCXS
Green	50/Box	GCIGR	Ultra® Sensitive FogFree® Earloop		
Lavender	50/Box	GCILV	White	40/Box	GCFCXSF
Pink	50/Box	GCIPK	Ultra® Sensitive FogFree® Earloop w/ Shield		
Sapphire	50/Box	GCISA	White	25/Box	GCPWS
Teal	50/Box	GCITE	Ultra® Earloop		
Topaz	50/Box	GCITZ	Blue	40/Box	GCFCXU
Turquoise	50/Box	GCITQ	Ultra® FogFree® Earloop		
Blue, Bulk Pack NEW!	100/Box	GCIBL100	Blue	40/Box	GCFCX
Isofluid® FogFree® Earloop			Ultra® FogFree® Earloop w/ Shield		
Blue	40/Box	GCICXB	Blue	25/Box	GCPW
Sapphire	40/Box	GCICXS	Isolator Plus N95 Particulate Respirator		
Topaz	40/Box	GCICXZ	Blue/white stripe	28/Box	GPRN95
Turquoise	40/Box	GCICXT	Face Shield		
Isofluid® FogFree® Earloop w/ Shield			Clear	24/Box	GCSS
Blue	25/Box	GCIPWB	Clear, Bulk Pack	72/Box	GCSSB
Sapphire	25/Box	GCIPWS	Patient Safety Mask w/ Shield		
Topaz	25/Box	GCIPWZ	White	25/Box	GCPAT
Turquoise	25/Box	GCIPWT	See-Clear™ Eyeglass Wipes		
Isofluid® Plus Earloop			White	120/Box	SEEC
Blue	50/Box	GPLUSBL			
Kaleidoscope	50/Box	GPLUSKA			
Pink	50/Box	GPLUSPK			
Isofluid® Plus Pure w/ Secure Fit® Technology					
White NEW!	50/Box	GPLUSWHSF			
Procedural Earloop w/ Secure Fit® Technology					
Blue	50/Box	GCPBLSF			
Lavender	50/Box	GCPLVSF			
Pink	50/Box	GCPPKSF			
Procedural Earloop					
Blue	50/Box	GCPBL			
Lavender	50/Box	GCPLV			

Crosstex can make no warranties or representations, either expressed or implied, that these products will fully protect the user from exposure to blood or bodily fluids or risk of contracting infectious diseases. OSHA requires the employer to evaluate the anticipated exposure and select the appropriate protective masks to prevent contamination of skin, eyes and respiratory passages.

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Proud member of the following associations:



MaskEnomics®:
The Crosstex guide to face mask selection and use
Aligned with ASTM F2100-11 and EN 14683 Standards



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WHY CROSSTEX®?

Enhanced Safety and Performance!

Crosstex offers a wide variety of mask designs, fit and filtration to match the protection needs for each procedure or risk level. The Crosstex MaskEnomics® filtration guide makes it easy to select the level of filtration required, including ASTM Level 1, 2 and 3 and N95 particulate respiration. From minimum performance masks for dry, short procedures, to our maximum filtration mask, Isolator Plus, Crosstex has the right mask for the task!



SECURE FIT Technology

TOP MASK 3 YEARS IN A ROW
Experience Secure Fit® for yourself.

Better Fit. Better Filtration. Better Protection.

- 3X More Protection***
 - Aluminum strips both above the nose and below the chin for a custom fit. Conforms to any size or shape face.
 - Patent pending design significantly reduces gapping at top, bottom and sides.

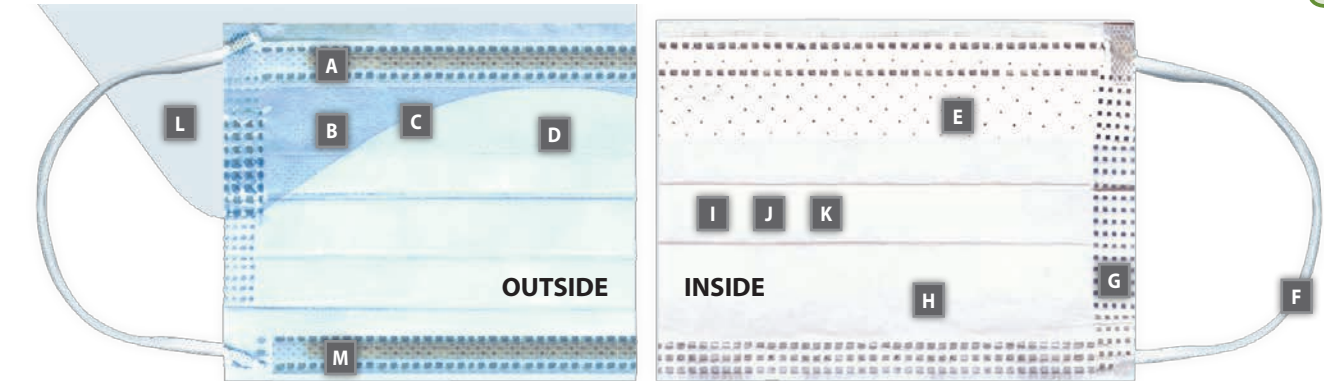
*Study on File



Although the N95 closely resembles a surgical mask, it is a respirator and must be used in accordance with all OSHA regulations regarding respiratory protection.

FEATURE GUIDE TO CROSSTEX EARLOOP/TIE-ON FACE MASKS

	A	B	C	D	E	F	G	H	I	J	K	L	M
Ultra™ Sensitive Earloop w/ Secure Fit® Technology
Ultra™ Sensitive FogFree® Earloop w/ Secure Fit® Technology
Ultra™ Sensitive FogFree® Earloop w/ Shield w/Secure Fit® Technology
Ultra™ Earloop w/ Secure Fit® Technology
Ultra™ Sensitive Earloop
Ultra™ Sensitive FogFree® Earloop
Ultra™ Sensitive FogFree® Earloop w/ Shield
Ultra™ Earloop
Ultra™ FogFree® Earloop
Ultra™ FogFree® Earloop w/ Shield
Procedural Earloop w/ Secure Fit® Technology
Procedural Earloop
Surgical Tie-on
Isofluid® Earloop w/ Secure Fit® Technology
Isofluid® FogFree® Earloop w/ Secure Fit® Technology
Isofluid® FogFree® Earloop w/ Shield w/Secure Fit® Technology
Isofluid® Earloop
Isofluid® FogFree® Earloop
Isofluid® FogFree® Earloop w/ Shield
Isofluid® Plus Earloop
Isofluid® Plus Pure w/ Secure Fit® Technology
Isolite® Earloop



- A** Extra-long, enclosed aluminum nose piece forms a strong seal for maximum protection.
- B** Spunbond outer layer material for maximum protection against fluids.
- C** Facial tissue outer layer is ultrasoft and odorless.
- D** Vapor barrier uniquely placed on outside layer to prevent fogging.
- E** FogFree/No-Fog strip blocks and absorbs moisture; forms a strong seal to prevent fogging; cushions nose ridge.
- F** Secure Loop earloops are soft, strong, fit comfortably, and attached to outside of mask to eliminate irritation.
- G** Soft-Bond ultrasonics ensures strongest construction, eliminating holes and defects.
- H** Highest quality filter media for best ASTM rating, filtration value and breathability.
- I** Cellulose inner layer for sensitive skin (white, extra soft, hypoallergenic) will not lint, tear or shred; void of dyes, inks and chemicals, which can cause irritation.
- J** Tissue inner layer is made of white, soft facial tissue.
- K** Spunbond inner layer made of white, fluid-resistant material.
- L** Attached wrap-around face shield is optically clear and distortion-free.
- M** Secure Fit® aluminum strip under chin significantly reduces gapping at the top, sides and bottom of the mask.

All Crosstex face masks are not made with natural rubber latex.

MAXIMUM FILTRATION

Indicated for use when treating patients with airborne diseases such as TB or influenza. Meets EN 149: 2001 FFP2 NR



Isolator Plus N95 Particulate Respirator

- NIOSH approved N95 Respirator.
- Meets guidelines for TB exposure control
- Resistance to penetration by synthetic blood: 160mmHg.
- PFE = 99.9% @ 0.1 micron.
- Malleable nose and chin pieces.
- Inner/outer fluid resistant layers.
- Chin pocket construction.



ASTM LEVEL 3

Ideal for procedures where heavy to moderate amounts of fluid, spray and/or aerosols are produced.

Meets EN14683 Rating – Type IIR Standard.



Ultra™ Sensitive Earloop w/ Secure Fit® Technology

- BFE = 99.9% @ 3 microns.
- PFE = 99.8% @ 0.1 micron.
- Patent pending design with aluminum strip under chin for custom fit.
- Fluid resistant outer layer.
- White hypoallergenic inner cellulose layer.
- Extra soft – will not lint, tear or shred.
- Free of chemicals, inks and dyes.
- Extra-long aluminum nose piece.



Ultra™ Sensitive FogFree® Earloop w/ Secure Fit® Technology

- BFE = 99.9% @ 3 microns.
- PFE = 99.8% @ 0.1 micron.
- Provides all the features of Ultra™ Sensitive with Secure Fit® technology with FogFree® strip on inner layer.



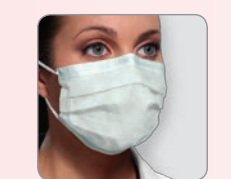
Ultra™ Sensitive FogFree® Earloop w/ Shield w/ Secure Fit® Technology

- BFE = 99.9% @ 3 microns.
- PFE = 99.8% @ 0.1 micron.
- Provides all the features of Ultra™ Sensitive FogFree® with Secure Fit® technology with attached optically clear, distortion-free shield.



Ultra™ Earloop w/ Secure Fit® Technology

- BFE = 99.9% @ 3 microns.
- PFE = 99.8% @ 0.1 micron.
- Patent pending design with aluminum strip under chin for tight, custom fit.
- Fluid resistant white inner layer.
- Extra-long aluminum nose piece.
- Fluid resistant outer layer.



Ultra™ Sensitive Earloop

- BFE = 99.9% @ 3 microns.
- PFE = 99.8% @ 0.1 micron.
- Fluid resistant outer layer.
- White hypoallergenic inner cellulose layer.
- Extra soft – will not lint, tear or shred.
- Free of chemicals, inks and dyes.
- Extra-long aluminum nose piece.



Also available:

- Ultra™ Sensitive FogFree® Earloop
- Ultra™ Sensitive FogFree® Earloop with Shield



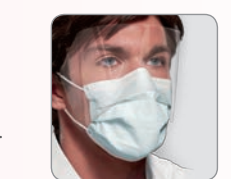
Ultra™ Earloop

- BFE = 99.9% @ 3 microns.
- PFE = 99.8% @ 0.1 micron.
- Fluid resistant outer layer.
- Fluid resistant white inner layer.
- Extra-long aluminum nose piece.



Also available:

- Ultra™ FogFree® Earloop
- Ultra™ FogFree® Earloop with Shield



Ultra™ FogFree® Earloop w/ Shield

- BFE = >99.9% @ 3 microns.
- BFE = 99.8% @ 0.1 micron.
- Fluid resistant outer layer.
- Fluid resistant white inner layer.
- Unique FogFree® with optically clear, distortion free wrap around shield.



ASTM LEVEL 2

Ideal for procedures where moderate to light amounts of fluid, spray and/or aerosols are produced.

Meets EN14683 Rating – Type IIR Standard.



Procedural Earloop w/ Secure Fit® Technology

- BFE = 99.9% @ 3 microns.
- PFE = 99.7% @ 0.1 micron.
- Patent pending design with aluminum strip under chin for custom fit.
- Fluid resistant outer layer.
- Fluid resistant white inner layer.
- Extra-long aluminum nose piece.



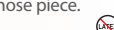
Procedural Earloop

- BFE = 99.9% @ 3 microns.
- PFE = 99.7% @ 0.1 micron.
- Fluid resistant outer layer.
- Fluid resistant white inner layer.
- Extra-long aluminum nose piece.



Surgical Tie-on

- BFE = 98% @ 1 micron.
- PFE = 99.2% @ 0.1 micron.
- Fluid resistant outer layer.
- Fluid resistant white inner layer.
- Extra-large panel for surgical procedures.
- Extra-long aluminum nose piece.



ASTM LEVEL 1

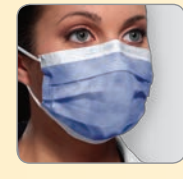
Ideal for procedures where low amounts of fluid, spray and/or aerosols are produced.

Meets EN14683 Rating – Type II Standard.



Isofluid® Earloop w/ Secure Fit® Technology

- BFE = 98.4% @ 3 microns.
- PFE ≥ 95% @ 0.1 micron.
- Patent pending design with aluminum strip under chin for custom fit.
- Fluid resistant outer layer.
- White tissue inner layer.
- Extra-long aluminum nose piece.



Isofluid® Earloop

- BFE = 98.4% @ 3 microns.
- PFE ≥ 95% @ 0.1 micron.
- Fluid resistant outer layer.
- White tissue inner layer.
- Extra-long aluminum nose piece.



Isofluid® FogFree® Earloop w/ Secure Fit® Technology

- BFE = 98.4% @ 3 microns.
- PFE ≥ 95% @ 0.1 micron.
- Provides all features of Secure Fit® Isofluid with addition of FogFree® strip on inner layer.



Isofluid® FogFree® Earloop w/ Shield w/ Secure Fit® Technology

- BFE = 98.4% @ 3 microns.
- PFE ≥ 95% @ 0.1 micron.
- Provides all features of Secure Fit® Isofluid FogFree® with attached optically clear, distortion-free



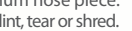
Isofluid® Plus Earloop

- BFE = 99.8% @ 3 microns.
- PFE = 99.01% @ 0.1 micron.
- Fluid resistant outer layer.
- White hypoallergenic inner cellulose layer.
- Extra-long aluminum nose piece.
- Extra soft – will not lint, tear or shred.



Isofluid® Plus Pure w/ Secure Fit® Technology

- BFE = 99.8% @ 3 microns.
- PFE = 99.01% @ 0.1 micron.
- Fluid resistant outer layer.
- White hypoallergenic inner cellulose layer.
- Extra-long aluminum nose piece.
- Extra soft – will not lint, tear or shred.



LOW PERFORMANCE

Ideal as a comfortable substitute for earloop face masks, this mask is a simple physical barrier ideal for exams and visitations or for dry, short procedures that do not produce fluid, spray or aerosols.



Surgical Molded

- BFE = 98.7% @ 4.2 microns.
- Splash resistant barrier.
- Flared edge prevents irritation.
- Soft, flexible nose piece.



MINIMUM PERFORMANCE

Ideal as a simple physical barrier for exams, isolation and visitations or for dry, short procedures that do not produce fluid, spray or aerosols.

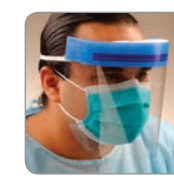


Isolite® Earloop

- BFE = 99.6% @ 3 microns.
- Outer facial tissue layer.
- White facial tissue inner layer.
- Extra-long aluminum nose piece.



Additional Face Protection Products



Face Shield

- Optically clear, distortion-free wrap-around face shield.
- 1.5" foam headband holds shield away from face; "floats" lightly on forehead, with no pressure on temples; vented for increased air flow.
- Protects mask and face from direct splatter; may prolong mask life.
- Sonically welded elastic headband for added strength.
- Anti-fog treatment on inside and outside of shield.



The mask performance levels were performed for Crosstex by Nelson Laboratories in accordance with ASTM Standard F2100-11 and represent the most current performance test data (of these Crosstex masks).

See-Clear™ Eyeglass Wipes

- Effective cleaning for eyewear and face shields.
- 4" x 5.5" wipes are anti-fog, anti-static.
- Will not scratch, dries quickly.



Patient Protection

Patient Safety Mask with Shield

- U.S. Patent No.s 6,185,740 and 6,523,170.
- Covers patient's eyes and nose.
- Protects fragile eye and mucosal tissue from flying particles, spray and splatter.
- Makes patients feel safe, but not "in the dark," with attached clear-vision shield.
- Form-fitting profile, flexible materials provide maximum access to mouth.
- White spunbond inner and outer layers.
- Fluid resistant.



Award Winning Crosstex Masks

