



# EHSP GUIDE TO FACE MASK SELECTION & USE



## ◀ MASK FILTRATION SCALE ▶



Aligned with ASTM F2100-11 and EN 14683 Standards



Innovation.Speed.Accuracy

*For Your Protection*



# ASTM FACE MASK PERFORMANCE LEVELS OF EHSP

Choosing a suitable mask in its proper place is one of the critical points for your PPE protocols. The American Society for Testing and Materials Standards (ASTM) is an internationally recognized organization that develops voluntary guidance for various industries and products to aid in quality control, product safety, and recommended usage and application.

ASTM standard F2100-11 provides specifications for face masks. ASTM levels for the face masks are classified into three levels of protection (low, moderate, high) to help clinicians decide which mask is appropriate for the task at hand. The European equivalent of ASTM Levels are classified in Types; Level 1 is equivalent to Type I, Level 2 is equivalent to Type II, Level 3 is equivalent to Type IIR, and N95 is equivalent to FFP2.

**Level-1** masks are suitable for brief examinations, exposing radiographs, and cleaning tasks.

**Level-2** masks are preferable for procedures that involve a moderate level of aerosols, such as hand instrumentation and sealants.

**Level-3** masks have a high level of protection and are used for procedures involving high levels of aerosols such as ultrasonic scaling, surgical procedures, and crown preparation.

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:

## STANDARDS FOR ASTM F2100-11 LEVELS & EN 14683:2019 TYPES

	LEVEL 1	TYPE I	LEVEL 2	TYPE II	LEVEL 3	TYPE IIR
FLUID RESISTANCE	80 mmHg	Not Required	120 mmHg	Not Required	160 mmHg	@ $\geq 16$ kPa > 120 mmHg
BFE	$\geq 95\%$	$\geq 95\%$	$\geq 98\%$	$\geq 98\%$	$\geq 98\%$	$\geq 98\%$
PFE, @ 0.1 MICRON	$\geq 95\%$	Not Required	$\geq 98\%$	Not Required	$\geq 98\%$	Not Required
DELTA P	< 5.0 mm H <sub>2</sub> O/cm <sup>2</sup>	< 40.0 Pa/cm <sup>2</sup>	< 6.0 mm H <sub>2</sub> O/cm <sup>2</sup>	< 40.0 Pa/cm <sup>2</sup>	< 6.0 mm H <sub>2</sub> O/cm <sup>2</sup>	< 60.0 Pa/cm <sup>2</sup>
FLAME SPREAD	Class 1	2007/47/EC MDD 93/42/EEC	Class 1	2007/47/EC MDD 93/42/EEC	Class 1	2007/47/EC MDD 93/42/EEC

## DEFINITION OF KEY TERMS:

Mask Selection Made Easy



**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.

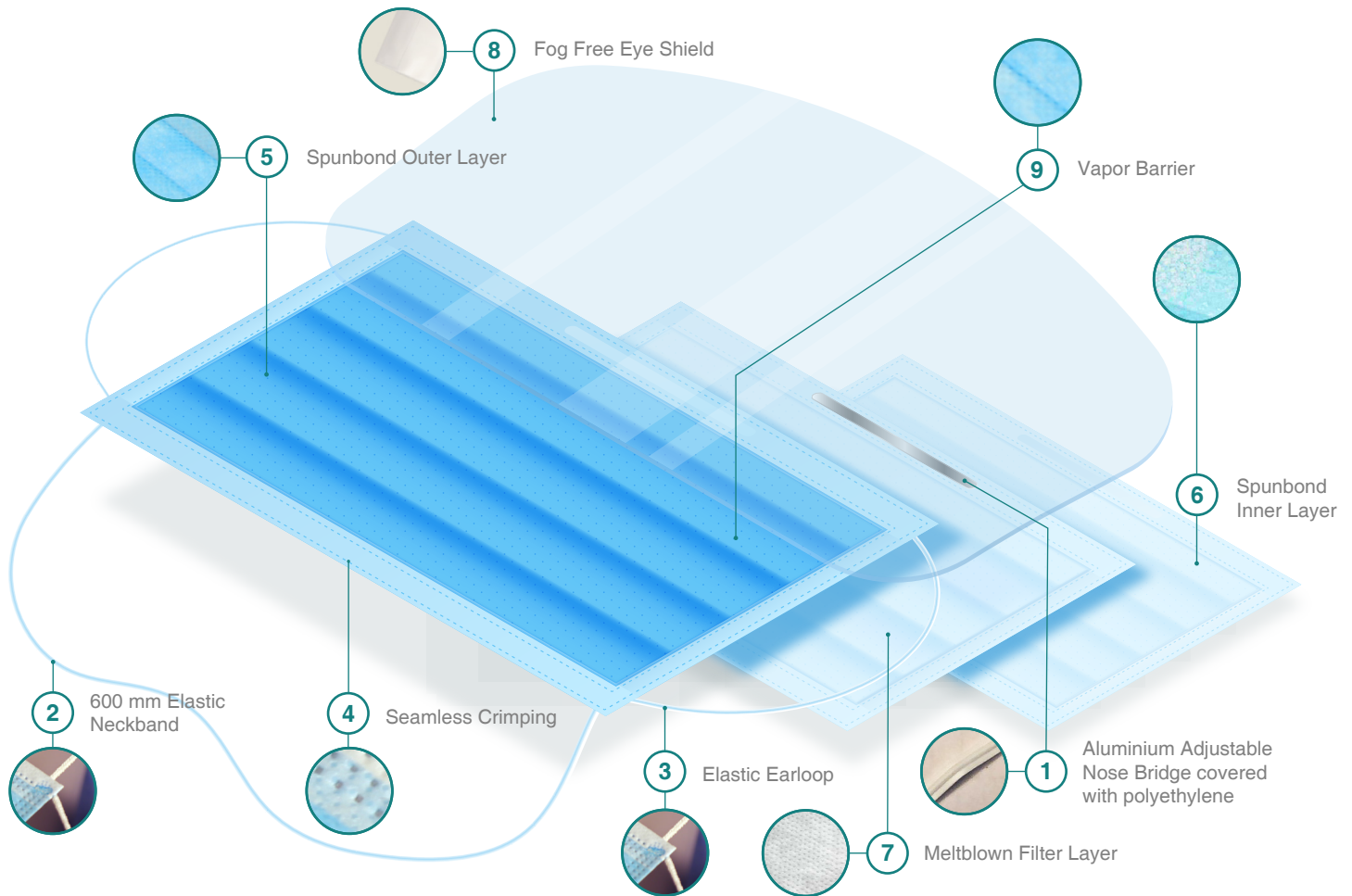


**DELTA P** (Differential Pressure) represents the pressure drop across the mask or resistance to air flow in mmH<sub>2</sub>O/cm<sup>2</sup> (European equivalent is shown as Pa/cm<sup>2</sup>). This determines breathing resistance – the higher the Delta P, the less the breathability, but the better the filtration.



**FLAME SPREAD** is a ranking derived by laboratory standard test methodology of a material's propensity to burn rapidly and spread flames. According to ASTM standards it is divided into classes and the European equivalent is EC directives.

# KNOW YOUR MASKS




- 1** The extra-long nosebridge, enclosed aluminum nose piece forms a strong seal to increase protection
- 2** The elastic neckband provides ease in wearing and comfort in removal from the face during no-risk times.
- 3** The elasticated earloop is durable, breathable and comfortable to apply
- 4** Seamless crimping makes it comfortable to wear
- 5** Hydrophobic spunbond outer layer for maximum protection against fluids
- 6** Soft and absorbent spunbond inner layer
- 7** Meltblown filter layer for protection against viruses, bacteria and airborne particles
- 8** Anti splash and anti splatter fog free eye shield
- 9** Vapor barrier to prevent fogging

## WE ALSO OFFER



**EHSP 340 N95/FFP2 Washable Mask**

- EN 14683+AC:2019 BFE 99%
- DELTA P = 0.85 H<sub>2</sub>O/cm<sup>2</sup>
- ASTM E2149 Anti Microbiol Activity Reduction 99.99% (Silver Material Filter)
- Eco-Friendly
- Washable and Reusable
- FFP2 Valve



**EHSP-PPP05 Face Shield**

- Anti-Fog Visor, Gripper Mechanism
- PolyCarbonate Plus 1 Spare Visors
- Adjustable Rubber Band to Fit Head Size
- Prevents Splash, Spray & Transfer of Non-Corrosive Fluids
- Impact Resistance: 595 KJm<sup>2</sup>



# Masks Feature Guide

EHSP Patented S-Mask, Earloop Style, Headloop Style, Tie-On, and procedure masks.

**Compliant with ASTM and EN Standards.**

	Aluminium Adjustable Nose Bridge	Elastic Neckband	Elastic Earloop	Seamless Crimping	Spunbond Outer Layer	Spunbond Inner Layer	Meltblown Filter Layer	Fog Free Eye Shield	Vapor Barrier
EHSP 410 Level 1 (Type I) Disposable S-Mask	✓	✓	✓	✓	✓	✓	✓		✓
EHSP 410 Level 1 (Type I) Disposable Face Mask	✓		✓	✓	✓	✓	✓		✓
EHSP 415 Level 2 (Type II) Disposable S-Mask - Kiddo (Children)	✓ X	✓	✓	✓	✓	✓	✓		✓
EHSP 415 Level 2 (Type II) Disposable Mask - Kiddo (Children)	✓ X		✓	✓	✓	✓	✓		✓
EHSP 420 Level 2 (Type II) Disposable S-Mask	✓	✓	✓	✓	✓	✓	✓		✓
EHSP 420 Level 2 (Type II) Disposable Face Mask	✓		✓	✓	✓	✓	✓		✓
EHSP 430 Level 3 (Type IIR) Disposable S-Mask	✓	✓	✓	✓	✓	✓	✓		✓
EHSP 430 Level 3 (Type IIR) Disposable Face Mask	✓		✓	✓	✓	✓	✓		✓
EHSP 440 Level 3 (Type IIR) Surgical Tie-On Mask	✓			✓	✓	✓	✓		✓
EHSP 450 Level 3 (Type IIR) Procedure Face Mask with Eye Shield	✓		✓	✓	✓	✓	✓	✓	✓
EHSP 300 N95 (FFP2) Respirator Face Mask (Earloop)	✓		✓	✓	✓		✓		
EHSP 310 N95 (FFP2) Respirator Face Mask (Headloop Style)	✓			✓	✓		✓		
EHSP 320 N95 (FFP2) Respirator Face Mask (Earloop)	✓		✓	✓	✓		✓		
EHSP 330 N95 (FFP2) Respirator Face Mask (Earloop)	✓		✓	✓	✓		✓		



## EHSP 300 N95 (FFP2) Respirator Face Mask

- NIOSH Tested N95 Respirator
- High-Efficiency Filtration > 95%<99.97%
- EN 149:2001 + A1:2010 Tested
- Tested for Filter Standards 42CFR:84 Equivalent of TEB-APR-STP-0059
- E13274-7:2019[%] Flow Rate 95 l/min Tested for Penetration of Paraffin Oil Mist



## EHSP 310 N95 (FFP2) Respirator Face Mask (Headloop Style)

- NIOSH Tested N95 Respirator
- High-Efficiency Filtration > 95%<99.97%
- EN 149:2001 + A1:2010 Tested
- Tested for Filter Standards 42CFR:84 Equivalent of TEB-APR-STP-0059
- E13274-7:2019[%] Flow Rate 95 l/min Tested for Penetration of Paraffin Oil Mist



## EHSP 320 N95 (FFP2) Respirator Face Mask (Earloop)

- NIOSH Tested N95 Respirator
- High-Efficiency Filtration > 95%<99.97%
- EN 149:2001 + A1:2010 Tested
- Tested for Filter Standards 42CFR:84 Equivalent of TEB-APR-STP-0059
- E13274-7:2019[%] Flow Rate 95 l/min Tested for Penetration of Paraffin Oil Mist



## EHSP 330 N95 (FFP2) Respirator Face Mask (Earloop)

- NIOSH Tested N95 Respirator
- High-Efficiency Filtration > 95%<99.97%
- EN 149:2001 + A1:2010 Tested
- Tested for Filter Standards 42CFR:84 Equivalent of TEB-APR-STP-0059
- E13274-7:2019[%] Flow Rate 95 l/min Tested for Penetration of Paraffin Oil Mist

# We are good innovators

We do it  
**fast**

&

We do it  
**accurately**



Prolonged use of face mask can sometimes cause discomfort to the wearer. The EHSP S-Mask gives the wearer the liberty to easily unweave the mask in no risk zones without compulsion of putting it in a pocket or a purse. Our Face Mask range of products gives our customers to choose between S-Masks and normal masks when ordering from ECEP HAN International.





### **EHSP 410 Level 1 (Type I) Disposable S-Mask**

- BFE > 95%
- PFE > 95% @ 0.1micron
- Fluid Penetration Resistance (80 mmHg)
- Delta P < 5.0mm H<sub>2</sub>O/cm<sup>2</sup>
- Sterilized upon Request (UV- Sterilized/ EO-Strilized)
- 3PLY Rectangular S-Mask



### **EHSP 410 Level 1 (Type I) Disposable Face Mask**

- BFE > 95%
- PFE > 95% @ 0.1micron
- Fluid Penetration Resistance (80 mmHg)
- Delta P < 5.0mm H<sub>2</sub>O/cm<sup>2</sup>
- Sterilized upon Request (UV- Sterilized/ EO-Strilized)
- 3PLY Rectangular Face Mask



### **EHSP 415 Level 2 (Type II) Disposable S-Mask - Kiddo (Children)**

- BFE > 98%
- PFE > 98% @ 0.1micron
- Fluid Penetration Resistance (120 mmHg)
- Delta P < 6.0mm H<sub>2</sub>O/cm<sup>2</sup>
- Sterilized upon Request (UV- Sterilized/ EO-Strilized)
- 3PLY Rectangular S-Mask & (Normal Mask)



### **EHSP 420 Level 2 (Type II) Disposable S-Mask**

- BFE > 98%
- PFE > 98% @ 0.1micron
- Fluid Penetration Resistance (120 mmHg)
- Delta P < 6.0mm H<sub>2</sub>O/cm<sup>2</sup>
- Sterilized upon Request (UV- Sterilized/ EO-Strilized)
- 3PLY Rectangular S-Mask



### **EHSP 420 Level 2 (Type II) Disposable Face Mask**

- BFE > 98%
- PFE > 98% @ 0.1micron
- Fluid Penetration Resistance (120 mmHg)
- Delta P < 6.0mm H<sub>2</sub>O/cm<sup>2</sup>
- Sterilized upon Request (UV- Sterilized/ EO-Strilized)
- 3PLY Rectangular S-Mask



### **EHSP 430 Level 3 (Type IIR) Disposable S-Mask & (Normal Mask)**

- BFE > 98%
- PFE > 98% @ 0.1micron
- Fluid Penetration Resistance (160 mmHg)
- Delta P < 6.0mm H<sub>2</sub>O/cm<sup>2</sup>
- Sterilized upon Request (UV- Sterilized/ EO-Strilized)
- 3PLY Rectangular S-Mask & (Normal Mask)



### **EHSP 440 Level 3 (Type IIR) Surgical Tie-On Mask**

- BFE > 98%
- PFE > 98% @ 0.1micron
- Fluid Penetration Resistance (160 mmHg)
- Delta P < 6.0mm H<sub>2</sub>O/cm<sup>2</sup>
- Sterilized upon Request (UV- Sterilized/ EO-Strilized)
- 3PLY Face Mask with Tie-On headband



### **EHSP 450 Level 3 (Type IIR) Procedure Face Mask with Eye Shield**

- BFE > 98%
- PFE > 98% @ 0.1micron
- Fluid Penetration Resistance (160 mmHg)
- Delta P < 6.0mm H<sub>2</sub>O/cm<sup>2</sup>
- Sterilized upon Request (UV- Sterilized/ EO-Strilized)
- 3PLY S-Mask with Anti-Fog Eye-Shield

# ORDERING INFORMATION

Description	Quantity	Ref.#	Description	Quantity	Ref.#
<b>EHSP 300 N95 (FFP2) Respirator Face Mask (Earloop)</b>			<b>EHSP 420 Level 2 (Type II) Disposable S-Mask</b>		
White	50/Box	EHSP300WE	Blue	50/Box	EHSP420-S-BE
White	60/Box	EHSP300WE	Pink	50/Box	EHSP420-S-PK
White	ldv Pck	EHSP300WE	White	50/Box	EHSP420-S-WE
<b>EHSP 310 N95 (FFP2) Respirator Face Mask (Headloop)</b>			<b>EHSP 420 Level 2 (Type II) Disposable Face Mask</b>		
Blue	50/Box	EHSP310BE	Blue	50/Box	EHSP420BE
Pink	50/Box	EHSP310PK	Pink	50/Box	EHSP420PK
White	50/Box	EHSP310WE	White	50/Box	EHSP420WE
Black	50/Box	EHSP310BK	Black	50/Box	EHSP420BK
<b>EHSP 320 N95 (FFP2) Respirator Face Mask (Earloop)</b>			<b>EHSP 430 Level 3 (Type IIR) Disposable S-Mask</b>		
Black	50/Box	EHSP320BK	Blue	50/Box	EHSP430-S-BE
Black	60/Box	EHSP320BK	Green	50/Box	EHSP430-S-GN
Black	ldv Pck	EHSP320BK	White	50/Box	EHSP430-S-WE
<b>EHSP 330 N95 (FFP2) Respirator Face Mask (Earloop)</b>			<b>EHSP 430 Level 3 (Type IIR) Disposable Face Mask</b>		
Blue	50/Box	EHSP330BE	Blue	50/Box	EHSP430BE
Pink	50/Box	EHSP330PK	Green	50/Box	EHSP430GN
White	50/Box	EHSP330WE	White	50/Box	EHSP430WE
Black	50/Box	EHSP330BK	Black	50/Box	EHSP430BK
<b>EHSP 410 Level 1 (Type I) Disposable S-Mask</b>			<b>EHSP 440 Level 3 (Type IIR) Surgical Tie-On Mask</b>		
Blue	50/Box	EHSP410-S-BE	Green	50/Box	EHSP440GN
Pink	50/Box	EHSP410-S-PK	White	50/Box	EHSP440WE
White	50/Box	EHSP410-S-WE	Blue	50/Box	EHSP440BE
Black	50/Box	EHSP410-S-BK	<b>EHSP 450 Level 3 (Type IIR) Procedure Face Mask with Eye Shield</b>		
Purple	50/Box	EHSP410-S-PE	Blue	50/Box	EHSP450BE
<b>EHSP 410 Level 1 (Type I) Disposable Face Mask</b>			Green	50/Box	EHSP450GN
Blue	50/Box	EHSP410BE	White	50/Box	EHSP450WE
Pink	50/Box	EHSP410PK	Black	50/Box	EHSP450BE
White	50/Box	EHSP410WE	<b>EHSP 415 Level 2 (Type II) Disposable S-Mask - Kiddo (Children)</b>		
Black	50/Box	EHSP410BK	Blue	50/Box	EHSP415-S-BE
Purple	50/Box	EHSP410PE	Pink	50/Box	EHSP415-S-PK
<b>EHSP 415 Level 2 (Type II) Disposable Mask - Kiddo (Children)</b>			Red	50/Box	EHSP415-S-RD
Blue	50/Box	EHSP415BE	Purple	50/Box	EHSP415-S-PE
Pink	50/Box	EHSP415PK	<b>EHSP 415 Level 2 (Type II) Disposable Mask - Kiddo (Children)</b>		
Red	50/Box	EHSP415RD	Blue	50/Box	EHSP415BE
Purple	50/Box	EHSP415PE	Pink	50/Box	EHSP415PK



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