

Comparison Protection Table for Surgical Masks and Respiratory Protective Equipment

Requirement	Type I surgical mask BS EN14683:2019	Type II surgical mask BS EN14683:2019	Type IIR surgical mask BS EN14683:2019	FFP1 Respirator (EN149:2001 +A1:2009)	FFP2 = N95 Respirator (EN149:2001 +A1:2009)	FFP3 Respirator (EN149:2001 +A1:2009)
Assigned Protection Factor	Low	Moderate	Moderate	Protection Level 4	Protection Level 10	Protection Level 20 (high)
Filter Efficiency	95% bacterial filtration efficiency	98% bacterial filtration efficiency	98% bacterial filtration efficiency	Min 80% bacterial filtration efficiency Max inward leakage 8%	Min 94% bacterial filtration efficiency inward leakage 8%	Min 99% bacterial filtration efficiency inward leakage 2%
Resistance	Direction of exhalation (inside to outside)	Direction of exhalation (inside to outside)	Direction of exhalation (inside to outside)	Direction of inspiration (outside to inside)	Direction of inspiration (outside to inside)	Direction of inspiration (outside to inside)
	Prevents the wearer from infecting the surrounding environment	Prevents the wearer from infecting the surrounding environment	Protects others from transmitting infection and wearer from splashes of blood and bodily fluids	Protects others from wearer transmitting infection	Protects others from wearer transmitting infection	FFP3 respirators can be valved, or non-valved and are not fully fluid-resistant unless shrouded. Non shrouded FFP3 respirators should be worn with a full-face shield if blood or body fluid splashing is anticipated
	Does not protect wearer from airborne particles such as COVID-19 Not effective against blood and other body fluids	Does not protect wearer from airborne particles such as COVID-19 Not effective against blood and other body fluids splashing is anticipated	Does not protect wearer from airborne particles such as COVID-19 Effective against blood/body fluids, spraying/splashing, secretions, or excretions	Does not offer desired protection against viruses such as COVID-19 Effective against large solid particles, Liquid, and aerosols	Protects wearer from viral transmission Meets WHO guidelines protection from COVID-19 May be used if FFP3 respirator is not available. Requires fit testing N95 protects wearer from viral transmission, used for AGP's, requires face fit testing, not CE marked, officially not legally recommended for use in Europe	Protects wearer from viral transmission Meets WHO guidelines protection from COVID-19 FFP3 respirator/ hood should be worn in high risk areas by healthcare workers where AGP's are undertaken Valved respirators should not be worn by healthcare professionals working in sterile areas such as theatres/surgical settings or areas where sterile procedures are undertaken as the exhaled breath is unfiltered Recommended for AGP's (high protection)
Splash Resistant	Not splash resistant, does not protect against blood and other bodily fluids	Not splash resistant, does not protect against blood and other bodily fluids. 3 ply layer prevents large particles from reaching patient or working surfaces	Splash resistant, 4 ply layer prevents large particles from reaching the patient or working services Includes splash resistant layer to protect against blood and other bodily fluids	Effective against solid or liquid	Effective against solid or liquid	Effective against solid or liquid

References

Health and Safety Executive (2015) Respiratory protective equipment at work: a practical guide. Updated August 2020.
<https://bit.ly/2Ly2zev>
[Accessed August 2020]

Health and Safety Executive (2020) Rapid evidence review of personal protective equipment provided in health care settings to manage risk during the coronavirus pandemic
<https://bit.ly/3nEW9Hn>
[Accessed October 2020]

Public Health England (PHE) guidance for the use of personal protective equipment (PPE). Updated guidance January 2021.
<https://bit.ly/2ZdfzJE>
[Accessed February 2021]