

# KNOW YOUR RISK



## PROBLEM



Healthcare workers are at increased risk of contracting respiratory infections.<sup>1</sup>

It has been estimated that healthcare workers may account for between

**10-20%** of SARS-CoV-2 diagnoses.

Increased risk of infection has been associated with inadequate PPE.

Studies show fluid strikes the face area of OR staff on average

**45-51%** of the time.<sup>2</sup>



It is estimated that over

**70% of masks are not**

rated for fluid resistance at all.<sup>3</sup>

Increased infections for healthcare workers are associated with a

**higher cost**

for hospitals and healthcare workers, which may include:



long term illnesses



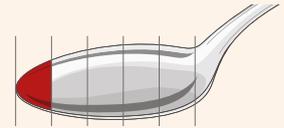
emotional stress



loss of income and/or employment



facility cost

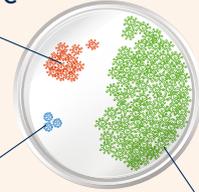


1 milliliter of blood = 5th of a teaspoon

Just **1 milliliter** of blood can contain virus counts that could include:<sup>4</sup>

HEPATITIS C  
1 Million

HIV  
10 - 1,000



HEPATITIS B  
1 Million - 10 Trillion

## NORMS & STANDARDS

EN 14683:2019<sup>5</sup> and EN 149:2001+A1:2009<sup>6</sup> are the state-of-the-art standards for medical face masks and respirators respectively.

**MASKS ARE RATED ACCORDING TO PERFORMANCE LEVELS**

EN 14683:2019



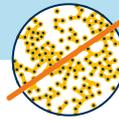
Bacterial Filtration Efficiency (BFE)



Splash Resistance



Breathability



Microbial Bioburden

**IIR**

**120 mmHg**  
Or **≥16.0 kPa**

**SPLASH RESISTANCE**

BFE ≥ 98%, Delta P < 60 Pa/cm<sup>2</sup>,  
Microbial cleanliness ≤ 30 cfu/g

EN 149:2001+A1:2009



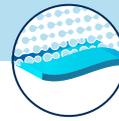
Particle Filtration Efficiency (PFE)



Bacterial Filtration Efficiency (BFE)



Maximum inward leakage



Maximum Penetration of filter material NaCl



Maximum Penetration of filter material oil



Breathing Resistance (mbar)

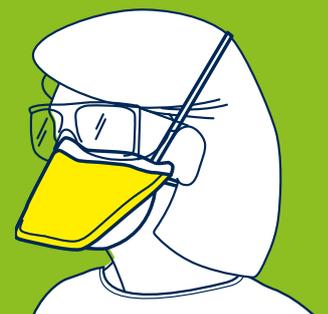
**FFP2 Respirator**

**94%**  
**Particle Filtration Efficiency**

## SOLUTION

### PROTECTION THAT WORKS AS HARD AS YOU DO

HALYARD® PFR P2 Filtering half mask. A PPE qualified surgical respirator. Providing **respiratory protection** against **airborne hazards and diseases** in the healthcare environment. The HALYARD Surgical respirator also provides **the protection of a Type IIR surgical mask**, with up to **120 mmHg splash resistance to fluids**, allowing you to work in both **safety and comfort**.



Legend: Personal Protective Equipment (PPE)

1 Nguyen, L. H. et al., 2020. Risk of COVID-19 among front-line health-care workers and the general community: a prospective cohort study. The Lancet, 5(9), pp. E475-483. 2 CG Davies et al, Ann R Coll Surg Engl 2007 89(8): 770-772; S Endo et al, Jour Hospital Infection 2007 (67) 1: 56-61; DC Berridge et al, Br J Surg 1993 80 (11): 1379-80. 3 GHX Data 2014. 4 Morgan, Jour Amer Biological Safety Assn, 2000, 5(2):47-53. 5 The British standards Institution, 2014. EN 14683:2019 Medical face masks – Requirements and test methods, London: BSI. 6 BSI Standards Publication, 2019. EN 149:2001 + A1:2009 – Respiratory protective devices – Filtering half masks to protect against particles – Requirements, testing, marking. London: BSI.

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