

KF-A F10(SC)

Particle Filtering Half Masks

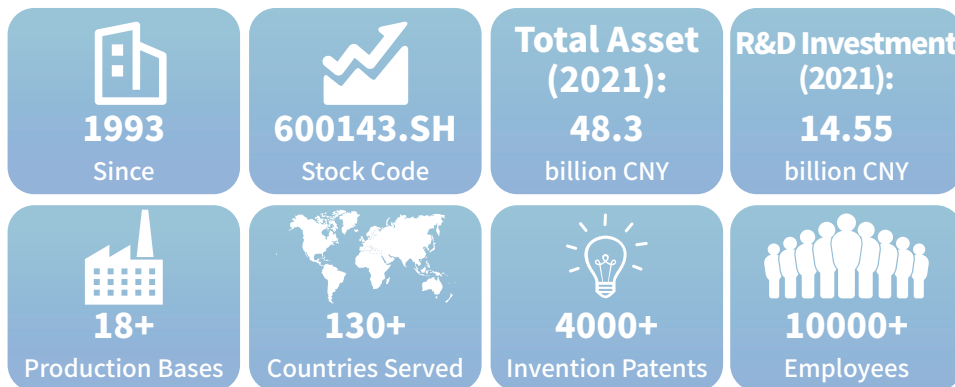
FFP2 NR



ABOUT KINGFA

Leading Manufacturer of PPE & Medical Supplies

KINGFA provides customers with PPE whole industry chain services from the upstream production of polypropylene, the midstream production of melt blown material to the downstream production of PPE & medical supplies.



Extensive Product Portfolio



「Carbon」 Strategy

KINGFA
金发科技

Dedicated to growing together and sharing in its achievements with its partners, Kingfa has been providing innovative, high-quality materials and a better quality of life for all. In response to the national goals of reaching CO₂ emissions peak before 2030 and achieving carbon neutrality before 2060, Kingfa has embarked on the road of Green, Low-carbon, and Circular Development. Starting in 2021, Kingfa together with its various stakeholders, will begin to establish a carbon management system in which Kingfa will track its corporate carbon footprint in order to stay in compliance with the relevant standards. Kingfa will continue to reduce its carbon emissions and disclose, on a regular basis, its progress towards carbon neutrality.



2060

carbon neutrality

- To collaborate with the entire industry chain to track and confirm the life-cycle carbon footprint of products in order to continuously facilitate the reduction of Kingfa's corporate emissions
- To provide low-carbon solutions for the entire value chain, while also accelerating the overall reduction of industry emissions



2030

green plastics (production)
plastic waste (collection)
recycled plastics (production)

1 million tons

- To select key products for the tracking and verification of their carbon footprints in accordance with relevant standards; to continuously improve and refine Kingfa's emission reduction work and announce its efforts to the public on a regular basis
- To construct an integrated system for the R&D, design, production, supply, and services of green and low-carbon recycled materials with the aim of efficiently facilitating Kingfa's goal of emission reduction per product unit
- To establish a recycling mechanism to benefit the plastic industry; to promote and constantly refine this recycling system



2030

GHG 30%



- To identify, inspect, and monitor corporate operational emissions; establish Kingfa's carbon management system with continued efforts to optimize the system
- To expand the scope of application for green energy sources, build green, industrial parks and factories, and encourage relevant parties to implement green and low-carbon guidelines in their production, life, and daily work
- To establish a green procurement mechanism and a carbon emission management system for Kingfa's supply chain, with an aim of achieving a net zero emission goal throughout Kingfa's entire supply chain

KINGFA Strengths



KINGFA offers a comprehensive range of OEM services, and can draw on years of experience meeting the specific needs of customers all over the world.



KINGFA is not just a solution provider but also a technological leader. Our technical support is committed to providing our customers with innovative solutions.



KINGFA has built a high-level independent R&D team with more than 800 masters and senior experts, staying at the forefront of technological innovation.



KINGFA has a complete quality management system, certified by ISO 9001 and ISO 13485. We are committed to providing the highest quality standards while maintaining the sustainability of our business.

KINGFA Face Masks Factory

KINGFA has established a vertically integrated supply chain, from the upstream production of polypropylene, the midstream production of melt-blown nonwoven fabric to the downstream production of face masks.

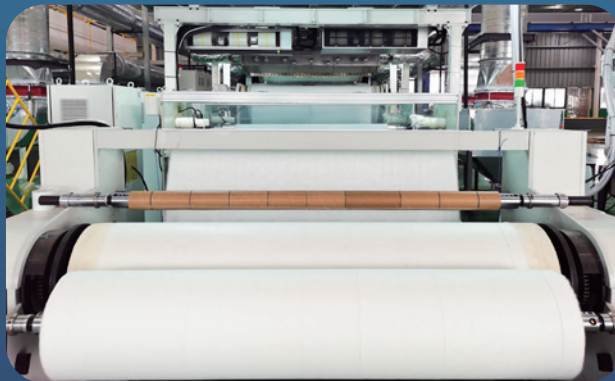


Upstream: Polypropylene



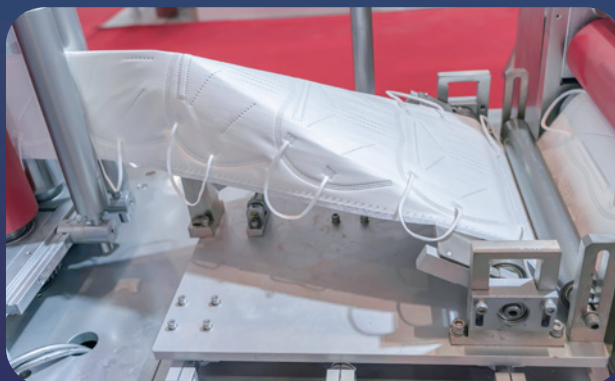
KINGFA invested RMB 10.5billion (\$1.6billion) to construct 1.2 million tons of polypropylene thermoplastic elastomer (PTPE) and innovative polymer modified materials integration project.

Midstream: Melt Blown Nonwoven Fabric



KINGFA focuses on the development and production of ultra-low airflow resistance & high filtration efficiency melt blown material.

Downstream: PPE&Medical products



KINGFA constructed 100,000 grade purification face masks workshop.400 functional mask production lines with a total daily production capacity of 40,000,000 units.

Professional Design. More Comfortable Protection

3D design (coned front)
provides more space (less lip contact)

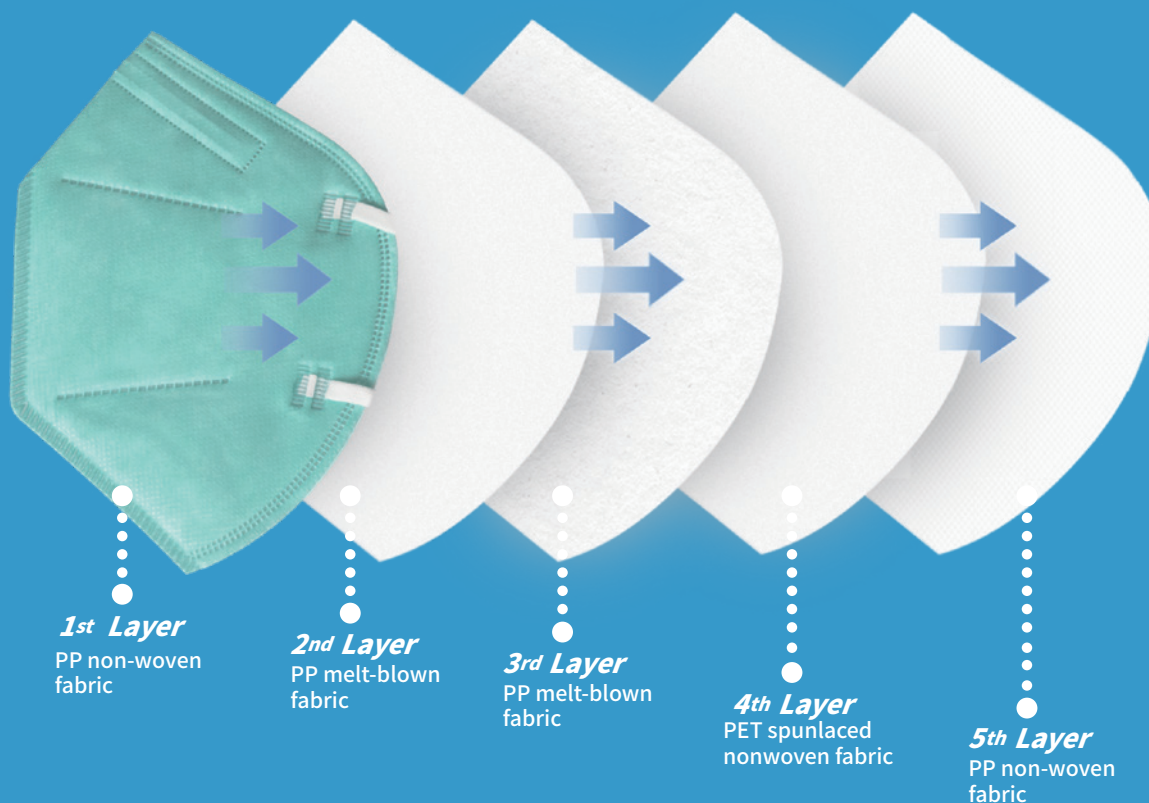
Extra-soft ear loops eliminate
pressure to the ear



Hidden nose clip makes mask
more soft and beautiful

Equipped with hooks to free
your ears

5 Layer Filtration Protection $PFE \geq 94\%$



FFP2 NR Particle Filtering Half Masks

Intended Use:

FFP2 NR particle filtering half masks protect workers from moderate levels of airborne particles including dust, aerosols. These masks effectively filter at least 94% of airborne particles, and have a maximum total inward leakage of 8% by wearer arithmetic means.

Technical Data Sheet

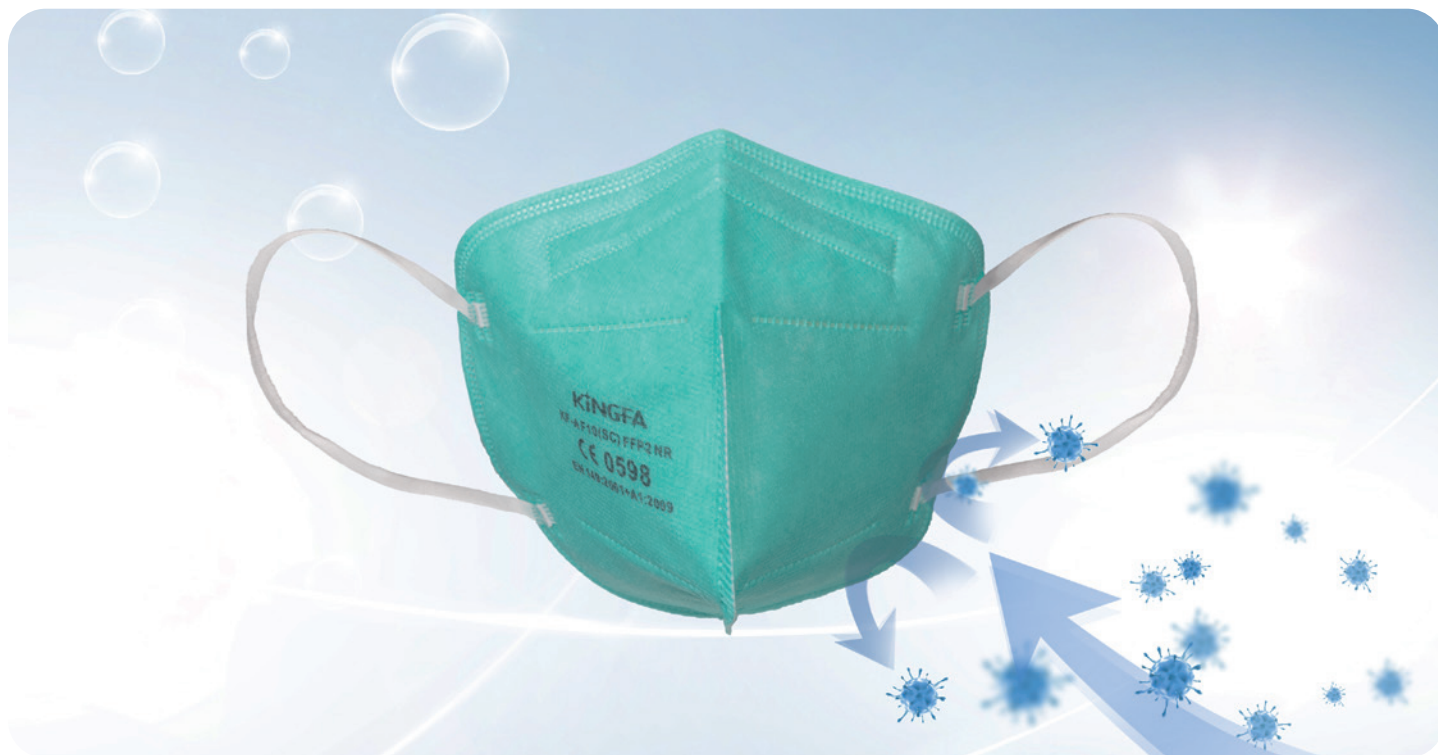
Ref. No.	KF-A F10(SC)
Product Description	Particle Filtering Half Masks
Standard	EN 149:2001+A1:2009
Certificate	CE (Module B + Module D)
Product Classification	FFP2 NR
Material	<p>Foldable, 5 ply, Ear loops, 3D design</p> <p>1st Layer: PP non-woven fabric</p> <p>2nd Layer: PP melt-blown fabric</p> <p>3rd Layer: PP melt-blown fabric</p> <p>4th Layer: PET spunlaced nonwoven fabric</p> <p>5th Layer: PP non-woven fabric</p>
Color	White/Black/Green
Free of	Glass fiber, Latex
Sterilization	Non-sterile
Shelf Life	3 years
Performance	<ol style="list-style-type: none"> 1. Particle Filtration Efficiency (PFE) $\geq 94\%$ 2. Breathing resistance(Inhalation, 30L/min) : $\leq 0.7\text{mbar}$ 3. Breathing resistance(Inhalation, 95L/min) : $\leq 2.4\text{mbar}$ 4. Breathing resistance(Exhalation, 160L/min) : $\leq 3.0\text{mbar}$ 5. Total inward leakage(TIL): For particle filtering half mask in accordance with manufacture's information, at least 46 out of the 50 individual exercise results for total inward leakage shall be not greater than 11% for FFP2, and in addition, at least 8 out of the 10 individual wearer arithmetic means for the total inward leakage shall be not greater than 8% for FFP2 . 6. Flammability: $\leq 5\text{S}$ 7. Dead space : $\leq 1.0\%$

High filtration efficiency

Appendix 2: Summarization of Test Data

Penetration of filter material

Aerosol	Condition	Sample No.	Penetration (%)
Sodium chloride test	As received	1	0.487
		2	0.313
		3	0.376
	Simulated wearing treatment	4	0.405
		5	0.413
		6	0.372
	Mechanical strength +Temperature conditioned	7	0.604
		8	0.576
		9	0.548
Paraffin oil test	As received	10	0.153
		11	0.127
		12	0.135
	Simulated wearing treatment	13	0.129
		14	0.147
		15	0.136
	Mechanical strength +Temperature conditioned	16	0.522
		17	0.582
		18	0.567
Flow conditioning : Single filter: 95.0 L/min			



The particle filtration efficiency is much higher than the standard technical requirements.

Aerosol	Test result	Standard requirements
Sodium chloride test	See the report	$\leq 4\%$
Paraffin oil test	See the report	$\leq 4\%$

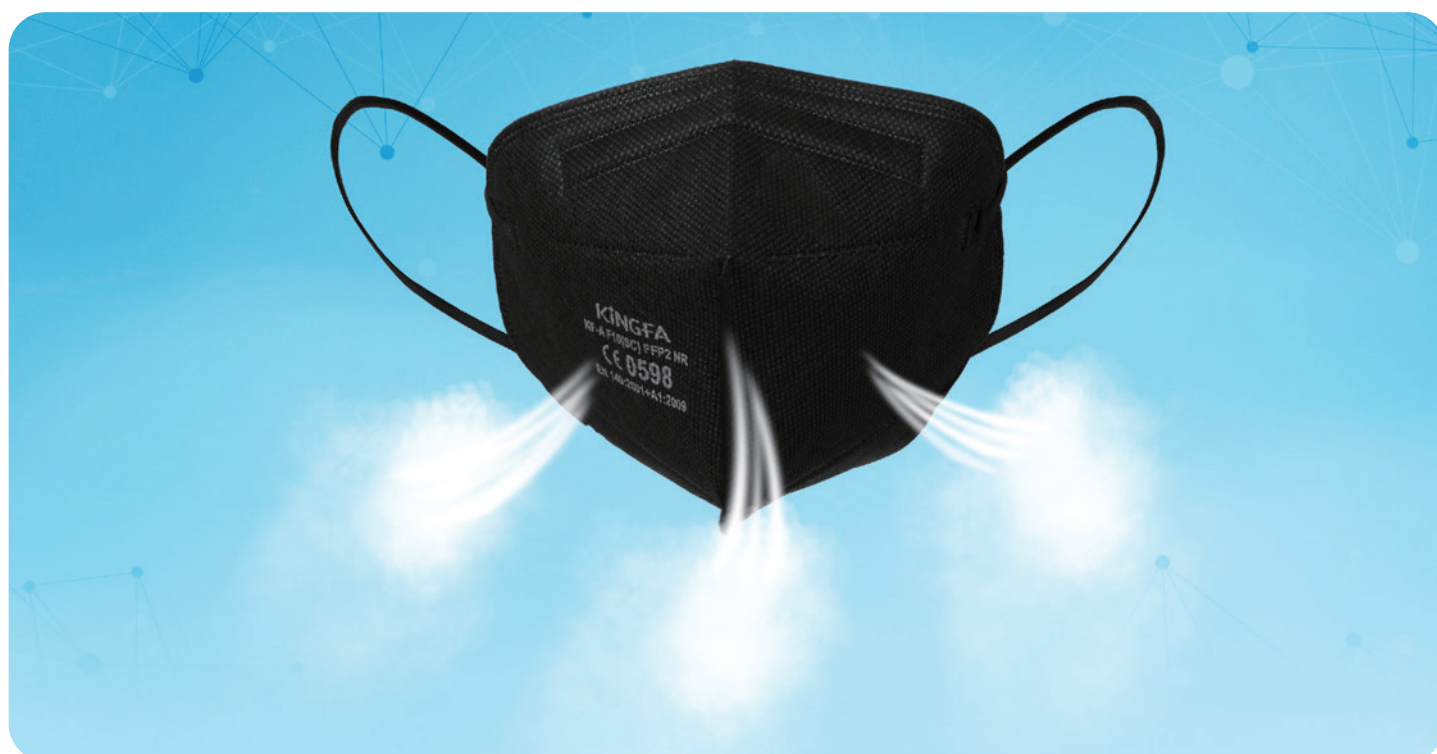
Low breathing resistance

Appendix 5: Summarization of Test Data

Breathing resistance (mbar)

As received	Flow rate(l/min)		1					2					3				
			A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
	Inhalation	30	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.4
Simulated wearing treatment	Inhalation	95	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.4	1.5	1.4	1.5	1.5
		160	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.2
	Exhalation	160	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.2
Temperature conditioned	Flow rate(l/min)		4					5					6				
			A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
	Inhalation	30	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4
Temperature conditioned	Inhalation	95	1.5	1.4	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.4	1.5	1.5	1.4	1.5	1.4
		160	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.1
	Exhalation	160	2.1	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1

A: facing directly ahead; B: facing vertically upwards; C: facing vertically downwards; D: lying on the left side; E: lying on the right side



The breathing resistance performance is much better than the standard technical requirements.

Flow	Test result	Standard requirements
30L/min inhalation	See the report	$\leq 0.7\text{mbar}$
95L/min inhalation	See the report	$\leq 2.4\text{mbar}$
160L/min exhalation	See the report	$\leq 3.0\text{mbar}$

Package Design

Exterior Design

6 pcs/box (1 pcs/bag, 6 bag/box)

Size: 14/3.5/12.5cm



Carton Design

200 boxes/carton (1200 pcs/carton)

Size: 57.5/37/65cm



Container Loading

(For Reference Only/Without Pallets)

20GP	216 cartons
40GP	432 cartons
40HQ	480 cartons

OEM Services

- Product design and development
- Flexible & timely manufacture
- Quality control and regulatory compliance
- Cost effective with product assurance
- Packaging & shipment
- Technical support

Package Design

Exterior Design

10 pcs/box (10 pcs/bag, 1 bag/box)

Size: 14/4/12.1cm



10
pcs/box



Carton Design

120 boxes/carton (1200 pcs/carton)

Size: 57.5/38.8/42cm



1200
pcs/carton



Container Loading

(For Reference Only/Without Pallets)

20GP	312 cartons
40GP	672 cartons
40HQ	720 cartons

OEM Services

- Product design and development
- Flexible & timely manufacture
- Quality control and regulatory compliance
- Cost effective with product assurance
- Packaging & shipment
- Technical support

Package Design

Exterior Design

30 pcs/box (10 pcs/bag, 3 bag/box)

Size: 13.5/12/12.1cm



30
pcs/box



Carton Design

40 boxes/carton (1200 pcs/carton)

Size: 55.5/38.5/38.3cm



1200
pcs/carton



Container Loading

(For Reference Only/Without Pallets)

20GP	360 cartons
40GP	744 cartons
40HQ	756 cartons

OEM Services

- Product design and development
- Flexible & timely manufacture
- Quality control and regulatory compliance
- Cost effective with product assurance
- Packaging & shipment
- Technical support

KINGFA Global Network

Starting with its first regional corporate office in Guangzhou in 1993, KINGFA has established regional corporate offices in Germany, United States, India, Malaysia. At the same time, we have created a global network by expanding our local sales network. This network allows KINGFA to deeply understand markets around the world, bringing local insight into market dynamics, business cultures and supply chains.



United States

Establishment: Feb 2015

Location: Canton, Michigan, United States

South China Headquarter

Establishment: Sept 1993

Location: Guangzhou, Guangdong

Germany

Establishment: Jan 2016

Location: Wiesbaden, Germany

West China Base

Establishment: Oct 2004

Location: Chengdu, Sichuan

India

Establishment: May 2013

Location: Chennai, India

East China Base

Establishment: Oct 2001

Location: Kunshan, Jiangsu

Malaysia

Establishment: May 2016

Location: Kuala Lumpur, Malaysia

North China Base

Establishment: Nov 2009

Location: Konggang, Tianjin



For more details

Contact your KINGFA representative for more information

GUANGDONG KINGFA SCI. & TECH. CO., LTD.



NO.28, Delong Avenue, Shijiao Town, Qingcheng District,
Qingyuan City, Guangdong Province, China



kingfamed@kingfa.com



www.medicalkingfa.com