

NB 2163

## **EU TYPE EXAMINATION CERTIFICATE**

Certificate No: 2163-PPE-943

Respiratory protective devices, filtering half masks to protect against particles manufactured by

Shenzhen Yunyifu Health Technology Co., Ltd.

13A, Cedar Building B, No.52, Tairan Sixth Road, Tian 'an Community, Shatou Street, Futian District, Shenzhen City, China

are tested and evaluated according to

## EN 149:2001 + A1:2009 Respiratory Protective Devices -Filtering Half Masks to Protect Against Particles -Requirements, Testing, Marking

Based on the type examination conducted with the evaluation of test reports, technical file according to Personal Protective Equipment Regulation (EU) 2016/425 Annex 5, it is approved that the product meets the requirements of the regulation.

## **Product Definition**

Single shift use particle filtering half mask for protection against solid and liquid aerosols, is a folding type, 5 layers cotton and polypropylene fabrics, without valve, fitted with ear straps, with nose sponge strip and internal nose clip.

Brand Name: YUNYIFU Model: PM-P2 Classification: FFP2 NR
Model have White, Purple, Black, Orange, Pink, Cyan, Blue, Orange/ Black multi-colour, Grey,
and Red versions

Here by the manufacturer is allowed to use notified body number (2163) and can fix CE mark, as shown below, on the Category III product models given above, with;

- Issuing an appropriate EU Declaration of Conformity according to Personal Protective Equipment Regulation (EU) 2016/425 Annex 9.
- Ongoing successful performance in fulfilment of the requirements set out in Personal Protective Equipment Regulation (EU) 2016/425 and harmonised standards, ensured by assessments based on Annex 7 (Module C2) or Annex 8 (Module D) of the regulation

This certificate is initially issued on 05/07/2020 and will be valid for 5 years, if there is no change in the relevant harmonised standard affecting the essential health and safety requirements.



Suat KACMAZ
UNIVERSAL CERTIFICATION
Director

This certificate is re-issued on 22.12.2020 (Rev1) with coloured versions of the model. For details refer to the technical evaluation report provided to the manufacturer.



## TECHNICAL ASSESSMENT REPORT

## REPORT DATE / NO: 22.12.2020 / 2163-KKD-943 / R1

Initial Report Date and Number: 05.07.2020 / KKD-2163-943

This technical evaluation report is enriched and updated with the use of the same fabric as defined in the initial technical file with colored versions in the outher most layer of the mask and earloops. There is no other design or material change in the colored versions of the model. See relevant test reports on the material innocousness of the material.

Manufacturer: Shenzhen Yunyifu Health Technology Co., Ltd.

Address: 13A, Cedar Building B, No.52, Tairan Sixth Road, Tian 'an Community, Shatou Street, Futian District, Shenzhen City, China

This report is for the, given above, accolicant body prepared according to the test results report conducted by UNIVERSAL CERTIFICATION dated 02.07.2020 with Serial No 06-2020-T0190 based on EN 149: 2001 + A1: 2009 standard and the technical file dated 04 July 2020 Version 01 provided by the manufacturer.

The technical file of the manufacturer, and risk evaluation against the essential health safety requirements and the test report evaluated for their relation with Essential Requirements of Personel Protective Equipment Regulation and found to be appropriate.

This report is an annex and an integral part of the EU Type Examination Certificate issued to the manufacturer. The test results and issued certificate belongs only to the tested model. The technical report consists of a total of 6 pages.

**Product Description:** Single shift use particle filtering half mask for protection against solid and liquid aerosols, is a folding type, 5 layers cotton and polypropylene fabrics, without valve, fitted with ear straps, with nose sponge strip and internal nose clip.

## Component and Materials:

Component	Material	Grade / Size
1st layer (Outer)	Spunbond Non-Wowen Fabric	50 g/m <sup>2</sup> (±2.5 g/m <sup>2</sup> )
2nd layer	Melt-blown - non-wowen fabric	$25 \text{ g/m}^2 (\pm 2.5 \text{ g/m}^2)$
3rd layer	Melt-blown - non-wowen fabric	$25 \text{ g/m}^2 (\pm 2.5 \text{ g/m}^2)$
4th layer	Es Filter Cotton	$40 \text{ g/m}^2 (\pm 2.5 \text{ g/m}^2)$
5th layer (Inner)	Spunbond Non-Wowen Fabric	$25 \text{ g/m}^2 (\pm 2.5 \text{ g/m}^2)$
Internal Nose Clip	PP + Metal Strip	91 mm (±1 mm)
Sponge Strip	Sponge Strip	75 mm (±1 mm)
Ear Strap	Nylon with Spandex	21 cm (±0.3 cm)

Classification: FFP2 NR

Trademark: YUNYIFU Model: PM-P2

Colored samples of the mask



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# ESSENTIAL HEALTH and SAFETY REQUIREMENTS GIVEN IN EUROPEAN UNION REGULATION EU 2016/425 CORRESPONDING RISKS FOR THE PRODUCT

## 1.1. Design principles

## 1.1.1. Ergonomics

PPE must be so designed and manufactured that in the foreseeable conditions of use for which it is intended the user can perform the risk related activity normally whilst enjoying appropriate protection of the highest prossible level. The test resuts with human subjects did not report any problem with the ergonomics of the product.

## 1.1.2. Levels and classes of protection

#### 1.1.2.1. Highest level of protection possible

The optimum level of protection to be taken into account in the design is that beyond which the constraints by the wearing of the PPE would prevent its effective use during the period of exposure to the risk or normal performance of the activity.

## 1.1.2.2. Classes of protection appropriate to different levels of risk

Where differing foreseeable conditions of use are such that several levels of the same risk can be distinguished, appropriate classes of protection must be taken into account in the design of the PPE.

## 1.2. Innocuousness of PPE

## 1.2.1. Absence of risks and other inherent nuisance factors

PPE must be so designed and manufactured as to preclude risks and other nuisance factors under fore seeable conditions of use. The manufacturer declares in his technical file that according to the results of risk analysis and the material properties they use in the manufacturing, the product has no hazardous content for health.

#### 1.2.1.1. Suitable constituent materials

The materials of which the PPE is made, including any of their possible decomposition products, must not adversely affect the health or safety of users. The material selection is processed in the technical manufacturing process and documented.

#### 1.2.1.2. Satisfactory surface condition of all PPE parts in contact with the user

Any part of the PPE that is in contact or is liable to come into contact with the user when the PPE is worn must be free of rough surfaces, sharp edges, sharp points and the like which could cause excessive irritation or injuries is evaluated and reported in the test report.

## 1.2.1.3. Maximum permessible user impediment

Any inpediment caused by PPE to movements to be made, postures to be adopted and sensory perception must be minimized; nor must PPE cause movements which endanger the user or other persons.

## 1.3 Comfort and effectiveness

## 1.3.1. Adaptation of PPE to user morphology

PPE must be designed and manufactured in such a way as to facilitate its correct positioning on the user and to remain in place for the foreseeable period of use, bearing in mind ambient factors, the actions to be carried out and the postures to be adopted. For this purpose, it must be possible to adapt the PPE to fit the morphology of the user by all appropriate means, such as adequate adjustment and attachment systems or the provision of an adequate range of sizes.

## 1.3.2. Lightness and design strength

PPE must be as light as possible without prejudicing design strength and efficiency.

Apart from the specific additional requirements which they must satisfy in order to provide adequate protection against the risks in question (see 3), PPE must be capable of withstanding the effects of ambient phenomena inherent under the foreseeable conditions of use

## 1.4. Information supplied by the manufacturer

The notes that must be drawn up by the former and supplied when PPE is placed on the market must contain all relevant information on:

- a) In addition to the name and addressof the manufacturer and/or his authorized representative established in the Community
- b) Storage, use, cleaning, maintenance, servicing and disinfection. cleaning, maintenance or disinfectant protection recommended by manufacturers must have no adverse effect on PPE or users when applied in accordance with the relevant instructions;
- c) Performance as recorded during technical tests to check the levels or classes of protection provided by the PPE in guestion;
- d) Suitable PPE accessories and the characteristics of appropriate spare parts;
- e) The classes of protection appropriate to different levels of risk and the corresponding limits of use;
- f) The obsolescence deadlineor period of obsolescence of PPEor certain of its components;
- g) The type of packaging suitable for transport;
- h) The significance of any markings(see 2.12)
- i) Where appropriate the references of the Directives applied inaccordance with Article5(6) (b);
- j) The name, address and identification number of the notified body involved in the design stage of the PPE

These notes, which must be precise and comprehensible, must be provided at least in the official language(s) of the member state of destination

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## 2. ADDITIONAL REQUIREMENTS COMMON TO SEVERAL CLASSES OR TYPES OF PPE

## 2.1. PPE incorporating adjustment systems

If PPE incorporates adjustment systems, the latter must be designed and manufactured so that, after adjustment, they do not become undone unintentionally in the foreseeable conditions of use.

## 2.3. PPE for the face, eyes and respiratory system

Any restriction of the user's face, eyes, field of vision or respiratory system by the PPE shall be minimised.

The screens for those types of PPE must have a degree of optical neutrality that is compatible with the degree of precision and the duration of the activities of the user.

If necessary, such PPE must be treated or provided with means to prevent misting-up.

Models of PPE intended for users requiring sight correction must be compatible with the wearing of spectacles or contact lenses.

#### 2.4. PPE subject to ageing

If it is known that the design performance of new PPE may be significantly affected by ageing, the month and year of manufacture and/or, if possible, the month and year of obsolescence must be indelibly and unambiguously marked on each item of PPE placed on the market and on its packaging.

If the manufacturer is unable to give an undertaking with regard to the useful life of the PPE, his instructions must provide all the information necessary to enable the purchaser or user to establish a reasonable obsolescence month and year, taking into account the quality level of the model and the effective conditions of storage, use, cleaning, servicing and maintenance.

Where appreciable and rapid deterioration in PPE performance is likely to be caused by ageing resulting from the periodic use of a cleaning process recommended by the manufacturer, the latter must, if possible, affix a marking to each item of PPE placed on the market indicating the maximum number of cleaning operations that may be carried out before the equipment needs to be inspected or discarded. Where such a marking is not affixed, the manufacturer must give that information in his instructions. The product is for single use and tested with simulated wearing conditioning.

## 2.6. PPE for use in potentially explosive atmospheres

PPE intended for use in potentially explosive atmospheres must be designed and manufactured in such a way that it cannot be the source of an electric, electrostatic or impact-induced arc or spark likely to cause an explosive mixture to ignite.

## 2.8. PPE for intervention in very dangerous situations

The instructions supplied by the manufacturer with PPE for intervention in very dangerous situations must include, in particular, data intended for competent, trained persons who are qualified to interpret them and ensure their application by the user.

The instructions must also describe the procedure to be adopted in order to verify that PPE is correctly adjusted and functional when worn by the user. Where PPE incorporates an alarm which is activated in the absence of the level of protection normally provided, the alarm must be designed and placed so that it can be perceived by the user in the foreseeable conditions of use.

## 2.9. PPE incorporating components which can be adjusted or removed by the user

Where PPE incorporates components which can be attached, adjusted or removed by the user for replacement purposes, such components must be designed and manufactured so that they can be easily attached, adjusted and removed without tools.

## 2.12. PPE bearing one or more identification or recognition marks directly or indirectly relating to health and safety

The identification or recognition marks directly or indirectly relating to health and safety affixed to these types or classes of must preferably take the form of harmonized pictograms or ideograms and must rem ain perfectly legible throughout the foreseeableuseful life of the PPE. In addition, these marks must be complete, precise and comprehensible so as to prevent any misinterpretation; in particular, where such marks incorporate words or sentences, the latter must appear in the official language(s) of the Member State where the equipment is to be used.

If PPE (or a PPE component) is too small to allow al lor part of the necessary marking to be affixed, the relevant information must be mentioned on the packing and in the manufacturer's notes.

## 3. ADDITIONAL REQUIREMENTS SPECIFIC TO PARTICULAR RISKS

## 3.10.1. Respiratory protection

PPE intended for the protection of the respiratory system must make it possible to supply the user with breathable air when exposed to a polluted atmosphere and/or an atmosphere having an inadequate oxygen concentration.

The breathable air supplied to the user by PPE must be obtained by appropriate means, for example after filtration of the polluted air through PPE or by supply from an external unpolluted source.

The constituent materials and other components of those types of PPE must be chosen or designed and incorporated so as to ensure appropriate user respiration and respiratory hygiene for the period of wear concerned under the foreseeable conditions of use.

The leak-tightness of the facepiece and the pressure drop on inspiration and, in the case of the filtering devices, purification capacity must keep contaminant penetration from a polluted atmosphere low enough not to be prejudicial to the health or hygiene of the user.

The PPE must bear details of the specific characteristics of the equipment which, in conjunction with the instructions, enable a trained and qualified user to employ the PPE correctly.

In the case of filtering equipment, the manufacturer's instructions must also indicate the time limit for the storage of new filters kept in their original packaging.



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Technical Assessment of EN 149: 2001 + A1: 2009 Standard and other Standards it refers to, Clauses Corresponding to the (EU) 2016/425 Regulation, Essential Health and Safety Requirements given above.

12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Cont	orming to EN	(49:2001 + A1:200	Standard Re	quirements					
	Classification: Particl									
Article	The mask subject to e	valuation based on th	e test results and technic	al file provided by the	he manufacturer is classified	as;				
5			ward Leakage: Classified							
		Mask is classified for single shift use, NR								
			re packaged to protect	hem from contami	ination before use and with	h cardboard boxes to prev				
Article			The second of th		ging design and the product	the property of the second sec				
7.4		the second secon	The state of the s		ort. Details given in Annex 9					
	Material: Materials used in particle filtering half masks, according to the simulated wearing treatment and temperature conditioning reunderstood it withstands handling and wear over the period for which the particle filtering half mask is designed to be used, it suffered realiure of the facepiece or straps, any material from the filter media released by the air flow through the filter has not constitute a									
				and the second second second second	iring of the mask does not ha					
	and safety of users.	The management	decided that the material	s asca in manaracti	ming of the mask does not no	ive an adverse affect the net				
Article		ilts the masks did n	ot collanse when subject	to simulated wear	ing and temarature conditio	ning No nuisance situation				
7.5			ests by human subjects.	to simulated wear	ing and temarature condition	illig. No huisance situation				
7.5				hound fabrica in th	ne most outer layer of the m	ank with the appleana as w				
		The state of the s			the management of the contract	the state of the s				
					mber 60.431.20.2008.01 for					
					of Very High Concern) com					
		A.C.	ia jaoric) usea in the mos	a outer layer of the	mask is considered to be saf	e jor use on the mask. Anne.				
4 1	sample photos of the c									
Article		ction: Particle filter	ing half mask is not design	gned to be as re-usa	ble. No cleaning or disinfect	tion procedure provided by				
7.6	manufacturer.									
	Practical Performance	ce:								
	The test report indicat	The test report indicates that the human subjects did not face any difficulty in performing the excercises while they were weared by the san								
	masks, in walking test	or work simulation	tests. The wearers did no	t report any failure	by means of ear straps com	fort, security of fastenings				
Article	field of vision. Also no	imperfactions repor	rted during total inward to	ests about the comfo	ort, field of vision and fasten	ing issues.				
7.7					Requirements in acco	ordance with EN				
	Ass	essed Elements	Positive	Negative	149:2001 + A1:200					
	2.Head h	arness comfort	2	0	Positive results are obta	nined from the test				
	3.Securit	y of fastenings	2	0	subject					
	5.Field o		2	0	No imperfe	erfections				
	Conditioning: (A.R.)	As Received, origin	al							
Article	Finish of Parts: The	test report states that	the particle filtering half	masks which are l	ikely to come into contact w	with the user, do not have sh				
7.8		Finish of Parts: The test report states that the particle filtering half masks, which are likely to come into contact with the user, do not have shat edges and do not contain burrs.								
7.0	cuges and do not cont	an ours.								
	Total Inward Leakag	10.								
	The Total Inward Le	The Total Inward Lekage test is conducted by 10 individual in an aerosol chamber with a walking band, and samples are taken during t conduction of the excercises defined in the standard. The samples used in the test are subjected to the conditioning required in the standard								
	condcution of the exc	ercises defined in th	e standard. The samples	used in the test are	e subjected to the condition	ing required in the standard				
	Temperature conditioning and as received. The face dimensions of the subjects are also reported. The measurement details for each sticle for each excersize are available in the test report.									
Article										
7.9.1										
		It was reported that;								
		All 50 exercise measurement results are smaller or equal to 11%, the values varies between 6,23 % and 8,53 %.  At least 8 out of the 10 individual's arithmetic mean is smaller or equal to 8%, the values varies between 6,34 % and 8,37 %.								
	At least 8 out of the 1	) individual's arithm	etic mean is smaller or ed	ual to 8%, the value	es varies between 6,34 % and	d 8,37 %.				
	14	According to the re	ported results, the prod	uct meets the limit	s for FFP1 and FFP2 class	ification.				
	Penetration of filter	material: Sodium C	hloride Testing							
	The same of the sa	NI <sub>2</sub> -C	Sodium Chloride To	esting Rear	irements in accordance with	D1				
	Condition	No. of	95 L/min max (%		EN 149:2001 + A1:2009	Result				
	(A.R.)	Sample 36	0,80							
	(A.R.)	37	0,11							
	(A.R.)	38	0,13		FFP1 ≤ 20 %	Filtering half masks fulfill				
	(S.W.)	1	0,19		1111 = 20 70	requirements of the standa				
		1	0,17		FFP2 < 6 %	FN FN 149·2001 + A1·20				

Condition	No. of Sample	Sodium Chloride Testing 95 L/min max (%)	Requirements in accordance with EN 149:2001 + A1:2009	Result		
(A.R.)	36	0,80				
(A.R.)	37	0,11				
(A.R.)	38	0,13	FFP1 ≤ 20 %	Filtering half masks fulfill th		
(S.W.)	1	0,19		requirements of the standard		
(S.W.)	2	0,21	FFP2 ≤ 6 %	EN EN 149:2001 + A1:200		
(S.W.)	3	0,25		given in 7.9.2 in range of the		
(M.S. T.C.)	10 0,36 FFP3 ≤ 1 %		FFP1, FFP2, FFP3 classes			
(M.S. T.C.)	11	0,42				
(M.S. T.C.)	12	0,32				

Conditioning: (M.S.) Mechanical Strength (T.C.) Temperature Conditioning (A.R.) As Received, original

(S.W.) Simulated wearing treatment

 $95 \text{ L/min} = 1,6 \text{ dm}^3.\text{sn}^{-1}$ 



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Article 7.9.2



	Penetration of filt	er material:	: Paraffin Oil Tes	sting								
	Cone	Condition		No. of Sample Paraffin Oil Testing 95 L/min max (%)		Requirements in accordance with EN 149:2001 + A1:2009		Result				
	(A	(A.R.)		39 1,86								
		(A.R.)		40 1,08								
		(A.R.)		41 1,53		EED1 - 20 0/	T. 1	10 1 0 1000 1				
		.W.)		4 1,61		FFP1 ≤ 20 %		alf masks fulfill the				
			5					ents of the standard				
Article	The state of the s	.W.)		1,59				9:2001 + A1:2009				
7.9.2		.W.)	6	1,74				given in 7.9.2 in range of the FFP1, FFP2 classes.				
		. T.C.)	13	1,79								
		(M.S. T.C.)		1,84								
	(M.S	(M.S. T.C.)		1,90								
	(T. (A.	Conditioning: (M.S.) Mechanical Strength (T.C.) Temperature Conditioning (A.R.) As Received, original (S.W.) Simulated wearing treatment										
Article 7.10						terials in contact with the		ng irritation or other				
	Flammability:			18								
	Condition	No. o Sampl		Visual inspection		Requirements in accordance with E 149:2001 + A1:2009		Result				
	(A.R.)	45		0,8 s		Filtering half mask	Passed					
Article	(A.R.)	46		0,9 s		hall not burn or not						
	(T.C.)	21		1,0 s		continue to burn for	Filtering half masks fulfill					
7.11	(T.C.)	22		1,0 s		more than 5 s after		requirements of the				
	(1.0.)	removal from the flame standard										
		Conditioning: (A.R.) As Received, original (T.C.) Temperature Conditioning										
	Carbon dioxide co	ntent of the	inhalation air:									
Article	Condition No. of Sample			CO <sub>2</sub> content of the inhalation air [%] by volume		of Requirements in accordance with EN 149:2001 + A1:2009		Result				
7.12	(A.R.)	26	0,:	59	air			Passed				
7.12	(A.R.)	27		0,67		CO <sub>2</sub> content of the inha	lation air	I assect				
	(A.R.)	28	0,		0,65 [%]	shall not exceed an av 1,0% by volum	erage of	Filtering half masks fulfil requirements of the standard				
	Conditioning: (A.R.) As Received, original											
Article 7.13	Head harness: In Practical Performance and TIL test reports no adverse effects have been reported for donning and remove of the mask also the results of these tests indicates that the ear loops are capable of holding the mask firmly enough.											
Article 7.14	Field of vision: In	Practical Per	formance report,	no adverse effects	were reported for	the field of vision availab	ility when	the mask is weared.				
Article 7.15	Exhalation Valve(	Exhalation Valve(s): The model under inspection have no valves.										
	Breathing Resista	nce: Inhalati	on									
	The overall evaluation of the results gathered for 9 different samples 3 as received, 3 with temparature conditioning, 3 simulated wearing											
		tion of the	regulte gathered t	for 9 different car	inles i as receit							
Article	The overall evalua											
	The overall evaluatreatment complies	with the lin	nits given in the s	standard for FFP1,	FFP2 and FFP3	classes. This is valid for	inhalation					
<i>Article</i> 7.16	The overall evaluatreatment complies	with the lin	nits given in the s	standard for FFP1,	FFP2 and FFP3		inhalation					





Article 7.17	Clogging: This test is not applied to Particle Filtering Half Mask which is not reusable.
Article 7.18	(For single shift use devices, the clogging test is optional test. For re-usable devices test is mandatory.)  Demountable Parts: There are no demountable parts of the mask.
Article 8	Testing: All tests conducted according to Clause 8 of this standard is available in the test report and are evaluated in this report for qualification and classification of the mask.
	Marking – Packaging: Necessary markings are available on the product package (box). The manufacturer and its trademark is clearly visible. The type of the mask and the classification including the status of re-usability, the reference to EN 149:2001+A1:2009 standard, the end date of shelf life, uisng and storage instructions and pictograms and CE mark are available on the product package. The above evaluation is based on the technical document for packaging and marking, for box design. Verified on the Annex 9.1 of the technical file.
Article 9	The technical documentation for mask design (drawing) also evaluated for marking requirements, drawing PM-P2. The mask template (drawing) indicates that the mask will carry information about the manufacturer, Type of mask, the reference to EN 149+A1:2009 standard and classification including the re-usability of the mask. The manufacturer also printed CE mark with our Notified Body number. The mask do not have sub-assemblies. The marking statement given in the technical documentation was not available on the tested specimen, the manufacturer shall consider to use the marking as stated in the technical file in case of serial manufacturing. Model PM-P2 drawing exists in the technical file of the manufacturer, Annex 6 of technical file.
Article	Information to be supplied by the manufacturer: In each of the smallest commercially available packaging of the product, implementation (installation instructions) pre-use controls, warning and usage limitations, storage and meanings of symbols / pictograms are defined. User instruction document in the technical file found to be appropriate. The manufacturer shall include this documented user information text in every smallest commertially available package, Annex 8 of Technical file.

PREPARED BY	APPROVED BY	AL CERTIE
Osman CAMCI PPE Expert	Suat KAÇMAZ WALLE Director	2163