

**ስ: የጤረታ ቁጥር NCB/PSA6/MOH-COVID-19/ A B HR and Surgical Face Mask /LR/01/20 ተሳታፊዎች በመብቱ**

**ጉዳይ:- ማስተካከያ መስጠትን ደመሰክታል**

የጤረታው መክፈቻ እና መዘገያ ወደ ግንቦት 11, 2012 ዓ.ም 8:00 እና 8:30 ሰዓት እንደቀደም ተከተላቸው የተራዘመ መሆኑን በተጨማሪም የሚከተሉት ምርቶች ተጨማሪ መሆናቸውና እንዲሁም የምርቶችን የቴክኒክ መዘርዘር(Technical Specification) ከዚህ ደብዳቤ ጋር ያያዝን ሲሆን የጤረታ ሰነድ እካል መሆኑን እንገልጻለን።

S.no	Item Description	Unit	Quantity
4	Reusable face mask	piece	2,745,225
5	Cover all	Each	400,000

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**ግልግጭ**

- ሰግኸ አስተዳደር ዘርፍ ም/ዋና ዳይሬክተር
- ሰኪሚካል የህ/መገልገያ ግዥ ቡድን

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1. Technical Specification for Non-Clinical Face mask (For Public Use Only) -- Reusable Face Mask

1.1 Description

Non-Clinical Face mask- is non-clinical personal protective equipment (PPE) that reduces the chance of exposure to COVID-19 and other small particles by protecting communities from inhaling “droplets” of infectious agents. Non-clinical PPE can be made in two and three layers with technical specification as listed below.

1.2 Technical Specification

Characteristic	Technical Specification		
Material Composition	Mask body- three layers	Outer Layer	woven Polyester fabric, GSM- 120-160
		Filter Layer	Nonwoven (PP, PET), GSM< 80
		Inner Layer	knitted Cotton fabric, GSM <120
	Mask body- three layers	Outer Layer	woven Polyester fabric, GSM- 140-180
		Inner Layer	knitted Cotton fabric, GSM -150-180
	Nose clip	Fusing materials- $\sigma\eta\eta\eta\delta\delta$ , Aluminum(if locally available)	
Elastic Band	Polyurethane + Polyester and/or any textile fabric		
Color	Mask	Inner layer any light colour and outer layer dark colour	
	Elastic Band	Any colour	
Nose Clip Style	Flat Nose Clip		
Shape	Cone/ round/ oval- do not collapse against the mouth		
Dimension	Body Size	Length	131 mm
		Width	114.5 mm
		Height	50 mm
	Nose Clip	Length	88 mm
	Headband	Upper Length	300 mm
		Lower Length	280 mm

Note: -

- ◆ Sum of layers GSM in single mask can be 300 -350 (More construction may create breathing difficulty and lower may create fluid and aerosol filtration limitation)
- ◆ Elastic twill tape which hold with ear shall be relax enough for longer duration utilization
- ◆ All material used for non-clinical mask preparation shall be allergic free and skin friendly

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1.3 Non-clinical Face Mask:- Fabric, trims and accessories quality requirement and Test Method

S/No	Inputs Type	Parameters	Specification	Test Method	Sample Size
1	Fabric	◦ Warp	30 Ne/	ISO and ASTM	
		◦ Weft	30 Ne/		
		Weight of fabric (GSM)	As per technical specification		
		Tensile strength in N			
		◦ Warp direction	500N		
		◦ Weft direction	450N		
		Abrasion Resistance/5000rubs/	4-5		
		Color fastness to Light	>5		
		Color fastness to washing	4-5		
		Color fastness to Dry Rubbing	4-5		
		Color fastness to Wet Rubbing	4		
		Color fastness to Perspiration	4-5		
		Color fastness to chlorinated water (optional)	4-5		
		Water Repellency (optional)	Good		
Dimensional stability (% warp x fill) (After 3 washes)	<5				
2	Sewing thread	Material composition/blend	100% polyester		
		Yarn count (D)	40/2		
		Fabrication/	Double twist		
		Tensile strength in N			
		Color fastness to Light	>=6		
		Color fastness to washing	4-5		
		Stitch per inch	10-12		
3	Twill tape elastic	Material composition/blend	90% polyester 10% spandex		
		Yarn count (Ne)	50Ne		

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		Color fastness to Light	$\geq 6$		
		Color fastness to washing	4-5		
		Elasticity recovering ) (After use & washes)	8+-2		
4	Non-woven(PP, PET)	Material composition	100% polyester/PP		
		Dimensional stability (% After wear & washes)	<1		
5	Poly bag	Material composition	Plastic		
		Size (optional)	(4*6) and (5*8) inch		
6	Carton	Size (optional)	Lx W x H (38*30*25) cm		

*Sumi Prasad*

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### 3. Technical Specification for surgical, type IIR, level 2, S.U., non sterile, ear loop

#### 3.1 Description

A surgical face mask is used to protect both surgical patients and operating room personnel from the transfer of microorganisms, body fluids and particulate material and also it should protect from germs coming from patients side.

#### 3.2 Technical Specifications

Material Characteristic	Technical Specification			Test Method	References
Material Composition	Mask body	Outer Layer	Spun-bonded non-woven polypropylene fabric, GSM 18-20, Width-180mm	NIOSH procedures	WHO
		Filter Layer	Melt blown non-woven polypropylene fabric, GSM 25-30, Width-180mm		
		Inner Layer	Spun-bonded non-woven polypropylene fabric, GSM 25-30, Width-200mm		
	Nose clip	Aluminum			
	Elastic Band	Polyurethane + Polyester or Polyester with Lycra		ISO1833-1	
Color	Mask	White			
	Elastic Band	Yellow or white			
Thickness	80 Micrometers (um), ±10%			ASTM D1777	
Nose Clip Style	Flat nose clip				
Dimension	Body Size	Length	131 mm	ASTM D668-12	
		Width	114.5 mm		
		Height	50 mm		
	Nose Clip	Length	88 mm		
	Headband	Upper Length	300 mm		
		Lower Length	280 mm		

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### 3.3 Quality Requirement, Test Method and required equipment

S.N.	Technical parameters	Requirement limits	Int. standards		Test equipment required
1	Bacterial filtration efficiency In Vitro (BFE)	BFE $\geq$ 98%	ASTM F2101-19	EN14683 Rating – Type IIR Standard.	Bacterial Filtration Efficiency Test Apparatus, autoclave, Incubator, Orbital Shaker, Refrigerator etc. see table 2
2	Particle filtration efficiency	PFE $\geq$ 98% @ 0.1 micron	ASTM F2299/F2299M-03(2017)		Bacterial and Aerosol Filtration Efficiency Test Apparatus
3	Breathability - Delta P	< 5.0 mm H <sub>2</sub> O/cm <sup>2</sup>	ASTM D737; (T2)		Differential Pressure Air (Delta P) Permeability Tester or Apparatus for measuring air resistance
4	Fluid Resistance	120 mmHg	ASTM F1862/F1862M-17		Fluid Resistance Test Apparatus
5	Flame Spread	Class I	ASTM levels 1,2,3		Flammability Tester

Note: all testing apparatus and detail reagent requirement will be attached in Annex 1

- ▶ Pleat style with ear loops or ties
- ▶ Protective four-layer protection shall cover Nose, mouth and Chin with ear-loop
- ▶ Splash resistant layer protection against blood and bodily fluids
- ▶ Color variety: with light and brighter colors
- ▶ Shape: flat pleated
- ▶ Reusability disposable product, single use only
- ▶ Fluid-resistant medical or surgical mask high fluid resistance.
- ▶ Good breathability.
- ▶ Internal and external faces should be clearly identified.
- ▶ Structured design that does not collapse against the mouth (e.g. duckbill or cup shape)
- ▶ Quality compliant with standards, including for fluid resistance level and breathability (differential pressure): EN 14683 type IIR performance, or ASTM f2100 level 2 or level 3, or equivalent.
- ▶ For Surgical Mask, Type IIR - EN14683., Disp , it require 100% import finished pp material as there is no technology in fabric production (non-woven but garment manufacturing can be done in Ethiopian.

*Amir Lakasa*

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# Technical Specifications a Quality Safety Coverall

## Technical Specification:

- A good quality Coverall is made from cotton or polycotton material.
- Coveralls have high visibility marks in arms, neck, and legs. It helps increase the visibility of the worker during day and night.
- The material surface can resist inorganic and organic liquids from going within.
- The coveralls are high-resistant to rubbing off or tearing. It is completely capable of keeping the protective properties intact.
- Coveralls are made with comfortable, light, breathable fabrics.
- The size range of safety clothes is versatile.

## Why should one invest in a good quality coverall?

- **Material:** It is made from a light material like cotton and Polycotton. It allows you to move freely.
- **Body Protection:** It is made with powerful safety properties. It offers ultimate body protection.
- **Durability:** It is a very durable product. It will provide a long time service.

*Sumit Redasa*

- **Provides Warmth:** These safety clothes can keep the body heated and warm. **Special Features:** It has a very efficient disposal method. The size of the cloth and weight is very convenient.
- **Use as a Uniform:** the safety overalls can be worn as an everyday work uniform because they come in various colors and designs.
- S:160CM M:165CM, L:170CM XL:175CM XXL:180CM, XXXL:185CM, XXXXL:190CM

*Gunung Pagar*

*V/A*