

# Technical Data Sheet

## Medical Face Mask (Non-Sterile)

Date: 2021-11-23 Version: A/6

### 1. General Information

#### 1.1. Legal Manufacturer

Name: Gemtier Medical (Shanghai) Inc.

Address: No. 18, Jianding Road, Fengjing Town, Jinshan District, 201502 Shanghai, China

#### 1.2. Design and Manufacturing Site

Name: Gemtier Medical (Shanghai) Inc.

Address: No. 18, Jianding Road, Fengjing Town, Jinshan District 201502 Shanghai, China

#### 1.3. European Authorized Representative Name:

CMC Medical Devices & Drugs, S.L.

Address: C/Horacio Lengo N° 18, CP 29006, Málaga-Spain.

#### 1.4. Conformity Assessment Procedure

According to Medical Devices Regulation (EU) 2017/745, the manufacturer follows the conformity assessment procedure relating to the EU declaration of conformity.

#### 1.5. Notified Body

No involvement of a Notified Body is needed for this Non-Sterile class I device.

#### 1.6. Declaration that no other Notified Body is used

Not applicable. No involvement of a Notified Body is needed for this Non-Sterile class I device.

### 2. Product Information

#### 2.1. Product Name and Trade Name

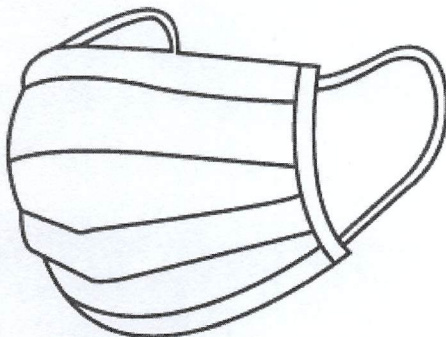
Name: Medical Face Masks

Type: NS2R-02, which has PTFE as filter. (PH-REF: 60000015, 60000021, 9924790)

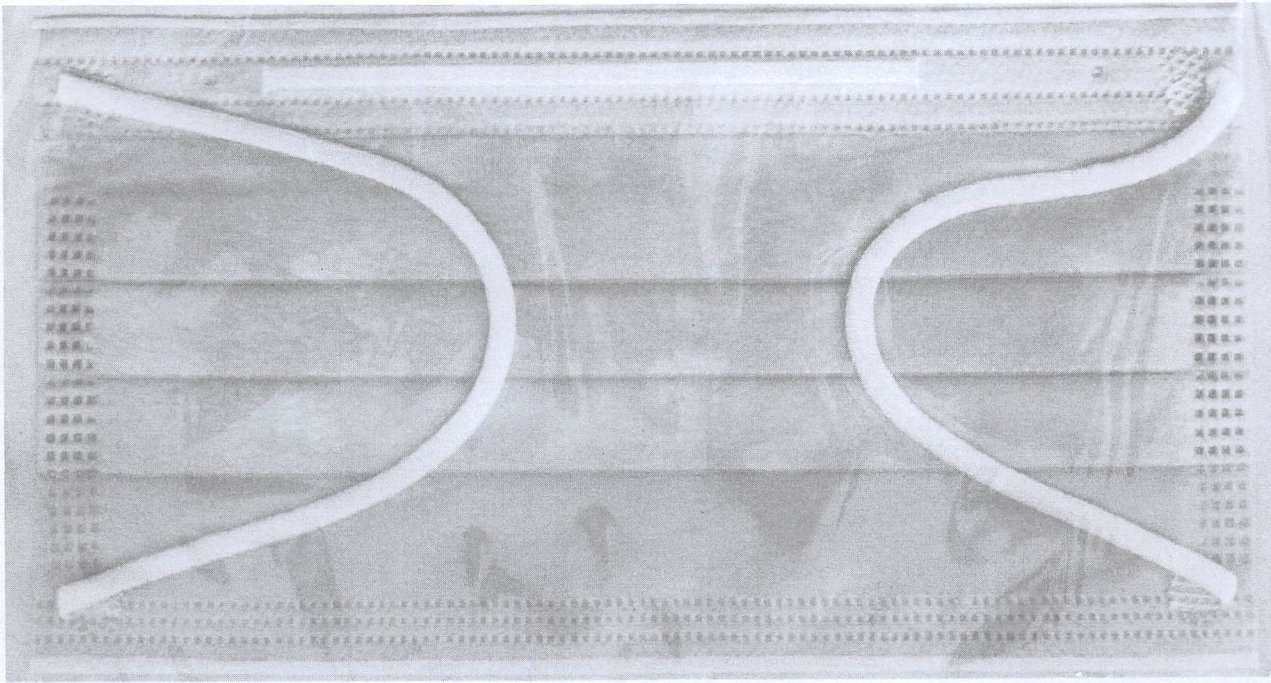
This product is Type IIR mask acc. to European Standard EN 14683.

#### 2.2. Product Schematic Diagram

Figure -Schematic Diagram of Medical Face Masks



### 2.3 Product Photo for Medical Face Mask



### 2.4. Classification

According to the definition of Medical Devices Regulation (EU) 2017/745 ANNEX VIII "All non-invasive devices are classified as class I, unless one of the rules set out hereinafter applies." the medical face mask are classified as

Class: I

Rule: 1

Justification of the classification:

Medical Face Masks are classified according to Rule 1 for non-invasive devices, as devices that either do not touch the patient or contact intact skin only. No other rules set out in MDR ANNEX VIII are applicable for this device.

### 2.5 Device Subcategory

**DEVICE CODE**

MDN 1214

**Device subcategory**

General non-active non-implantable devices used in health

### 2.6 Basic UDI-DI or Product Code

Basic UDI-DI: 69553561MASKAV6

UDI-DI for NS2R-02 in Gemtier standard package: 06955356111112



### 2.7. Bill of Material

We purchase all materials only from approved suppliers that have satisfied the selection and evaluation criteria as described in the SOP. The main raw materials for medical face mask are non-woven fabric and PE/PTFE.

Material for primary packaging: paper + PET/PE or PE pouch.

**Table 1 Bill of Material**

Component		Material	
Mask	Outer Layer	Spun-bond Polypropylene non-woven fabric, blue	
	Middle Layer	Filter layer	Polytetrafluoroethylene (PTFE Membrane)
		Insertion Layer	PP SPUNBOND NON-WOVEN FABRIC, white
	Inner Layer	Spun-bond Polypropylene non-woven fabric, white	
Noise Piece		Malleable iron wire with plastic covering	

Ear Loops	Spandex elastic cord (polyurethane core with polyamide cover)
Tie Strings	Spun-bond Polypropylene non-woven fabric, white

## 2.8 Product Performances

All tests shall be carried out on finished products or samples cut from finished products.

### Bacterial filtration efficiency (BFE)

When tested in accordance with Annex B of EN 14683, the BFE of the medical face mask shall conform to the minimum value given for the relevant type in Table 1 of EN 14683.

### Breathability

When tested in accordance with Annex C of EN 14683, the differential pressure of the medical face mask shall conform to the value given in relevant type in Table 1 of EN 14683.

### Splash resistance

When tested in accordance with ISO 22609 the resistance of the medical face mask to penetration of splashes of liquid shall conform to the minimum value given for Type IIR in Table 1 of EN 14683.

### Microbial cleanliness (Bioburden)

When tested according to EN ISO 11737-1 the bioburden of the medical face mask shall be  $\leq 30$  cfu/g tested. The number of masks that shall be tested is minimum 5 of the same batch/lot.

### Biocompatibility

According to the definition and classification in EN ISO 10993-1, a medical face mask is a surface device with limited contact. An evaluation should be made for the medical face mask according to EN ISO 10993-1 and applicable toxicology testing regime shall be determined.

### Breaking strength

The breaking strength at the connection point between each mask belt and the mask body should be not less than 10N.

**Table 1 – Performance requirements for medical face masks**

Test	Type I	Type II	Type IIR
Bacterial filtration efficiency(BFE), (%)	$\geq 95$	$\geq 98$	$\geq 98$
Differential pressure (Pa/cm <sup>2</sup> )	<40	<40	<60
Splash resistance pressure (kPa)	Not required	Not required	$\geq 16,0$
Microbial cleanliness (cfu/g)	$\leq 30$	$\leq 30$	$\leq 30$

## 2.9 Shelf-Life or Lifetime

The masks being produced in November 2021 and after have 3 years of shelf life.

The uninterrupted use duration of the device is usually less than 8 hours.



### 3. Labelling

For Medical face masks, information supplied by the manufacturer comprises the details on the label.

As labelling on the device itself is not practicable, the information needed to use the device safely is set out on the primary packaging and on the sales packaging (carton).

Labelling includes all applicable information required by MDR, Annex I, Chapter III, section 23.2 and EN 1041 "Information supplied by the manufacturer of medical devices".

This information takes the form of internationally recognized symbols. The symbols used are conform to the harmonized standard EN ISO 15223-1.

Package labeling includes product identification, lot number, product description, used by date, manufacturing date, do not re-use, do not use if package is damaged, manufacturer and EU representative information, etc.

The Organization ensures that only approved packaging labels will be used and distributed together with the products.

Each product unit is properly packaging to ensure its packing integrity without any damages or deterioration in nature. The production lot number and manufacturing date are identified.

The packaging and storage activities are described in the SOP Preservation of Products.

All packaging materials are properly labeled according to the SOP Identification and Traceability.

### 4. Packaging :

Medical face masks are primarily packed in the paper + PET/PE pouch.

For packaging with paper + PET/PE pouch:

Each pouch contains 10 masks.

5 pouches are packed into a sales box.

Each shipping container contains 2000 medical face masks.

Each carton size is 55.5\*44.5\*42cm, Gross weight: 11KG/carton

The sealing process has been validated, refer to validation report JT-SVF-06-035-2019.

### 5. Product Verification and Validation

#### 5.1. Pre-Clinical Evaluation

Pre-clinical evaluation was performed in framework of design validation. It includes functional and performance testing acc. to the product specification.

The documentation contains the results and critical analyses of all verifications and validation tests and/or studies undertaken to demonstrate conformity of the device with the requirements of the MDR and in particular the applicable general safety and performance requirements.

The tests confirm the pre-clinical safety of the device and its conformity with the specifications.

Other tests, e.g. Biocompatibility have also been performed.

#### 5.2. Product Testing (Performance and Safety)

Medical face masks are designed, manufactured and tested acc. to the standard series EN 14683:2019+AC:2019.

Performance, safety and functional testing has been performed in product type examination.

The performance and safety test includes bacterial filtration efficiency (BFE), breathability, splash resistance, microbial cleanliness (Bioburden), breaking strength.

The test was conducted by the accredited laboratory TÜV SÜD Products Testing (Shanghai) Co., Ltd. with representative samples of medical face masks.

REF: NS2R-02 TÜV SUD Test Report no. : 721653435-R1

In addition, batch-release test is performed for each production batch including safety and performance test and



bioburden test. The product specification and acceptance criteria are described in section 27 "Product performances" of the Technical Documentation.

### 5.3. Biocompatibility Evaluation

Materials in direct or indirect contact with the patient or user are identified and specified in bill of material. All these materials are broadly used in medical devices and have been proved as biocompatible and safe materials. Biocompatibility Evaluation is based on laboratory tests as defined for the product category in table A.1 of EN ISO 10993-1. For the medical face masks following consideration can be taken:

Nature of body contact: Intact skin or indirect contact with mucosal membrane;

Contact duration: A — limited ( $\leq 24$  h).

According to ISO 10993-1:2018 following tests should be done:

- Cytotoxicity acc. to EN ISO 10993-5;
- Sensitization acc. to EN ISO 10993-10;
- Irritation or intracutaneous reactivity acc. to EN ISO 10993-10.

All required tests were conducted with representative samples of Medical face masks with satisfied results.

#### Cytotoxicity

##### In Vitro Cytotoxicity Test Report

The MTT method results showed that the cytotoxicity ration of the 100% test article extract met the requirements. The test article extract did not show potential toxicity to L-929 cells.

REF: NS2R-02 Mid-Link Technology Testing Co., Ltd, Test Report no. : 2020-0083-001

#### Skin Sensitization Test Report

The positive rate of all test groups was 0%. All animals were not found abnormal clinical symptoms except skin reactions. All animals were normal weight changed. The sample extract showed no significant evidence of causing skin sensitization in the guinea pig.

REF: NS2R-02 Mid-Link Technology Testing Co., Ltd, Test Report no. : 2020-0083-002

#### Skin Irritation Test Report (Intracutaneous Reactivity)

The response of skin on testing sites was not more severe than that on the control sites. The primary irritation index for the test article was calculated to be 0. No abnormal clinical symptoms except skin reactions was found for all animals. The test result showed that the test article extract did not induce skin irritation in rabbit.

REF: NS2R-02 Mid-Link Technology Testing Co., Ltd, Test Report no. : 2020-0083-003

In addition, the non-woven material and primary packaging material have also been tested for biocompatibility. Similar masks have been manufactured and sold since decades. There were no incidents or serious complaints in relation to biocompatibility. This fact supports the evidence for good biocompatibility with the products. Evaluation of biocompatibility is a continuous process. For this purpose, post-production experience will be gathered and analysed. As soon as there are abnormalities in use of the medical face masks, a new evaluation will be started.

