

EN



HS100

**Sterile Protective Gloves with Shielding Effect  
Against Scattered X-Ray Radiation**

**MAVIG**

# HS100



## Efficient Protection for Your Hands

*MAVIG's sterile gloves with scattered X-ray radiation shielding now offer an optimized protection for medical staff.*

*A combination of traditionally contradicting properties has been achieved with the development of these gloves: Great shielding, great elasticity, great sensitivity.*

To drastically lower the radiation dose equivalent for personal is a must, and not just to the permissible levels of the effective dose! The idea of optimizing radiation protection demands that every possible measure has to be taken in order to minimize the amount of radiation exposure.

MAVIG offers with HS100 – X-ray-absorbing, sterile gloves – an efficient way for a reduction of radiation exposure to the hands. Last but not least, this has contributed to the inclusion of sterile protective gloves with shielding effect against scattered X-ray radiation in the recommendations of DIN 6815:2021 as protective equipment for radiation users.

With an average attenuation for scattered X-ray radiation of 45 - 55%, for example in the X-ray tube voltage range of 60 - 80 kV, the use of HS100 protective gloves contributes significantly in reducing the partial body dose of the radiation user's hands.

Excellent product characteristics and the optimized fit easily provide a better protection.

### § Legal Regulatory in between the European Union

Sterile gloves for protection against X-rays are used as personal protective equipment (PPE), while classified as a medical device (MD). Thus, the CE-conformity to both relevant certifications according PPE regulation (EU) 2016/425 and 93/42/EEC are mandatory for these products.

#### With MAVIG's HS100 you are on the safe side:

- ▶ Powder-free
- ▶ Low-protein natural rubber
- ▶ Lead free
- ▶ Non-toxic
- ▶ Sterile
- ▶ Excellent gripping ability\*
- ▶ High elasticity
- ▶ Great touch sensitivity
- ▶ Highly tear-resistant
- ▶ Available in multiple sizes

\* Content of water-soluble protein  $\leq 50 \mu\text{g/g}$

#### Our gloves are certified and CE-compliant.



*These protective gloves HS100 are exclusively intended for use in the scattered radiation field.*



## HS100: Safety. Efficiency. Flexibility.



### Versatile Features

The product is classified as a powder-free sterile glove, which features the additional benefit of X-ray protection properties on top of its core material characteristics of impermeability and protection against chemicals and microorganisms.



### Optimised for the Application

Great elasticity in combination with an excellent anatomical fit allows for optimal working conditions, bringing it in the same category of high quality surgical gloves, while additionally offering efficient protection against secondary X-ray radiation (scattered radiation). The product convinces with its high touch-sensitivity and dexterity. The micro-textured surface provides a secure grip, even in moist conditions. The soft, stretchable material with its anatomical form prevents fatigue and provides optimal ergonomic features.



### Lead Free

The product is intended for the shielding against secondary radiation and provides efficient protection. Lead free, metal oxides achieve the great shielding effect of our gloves.



### Low-Protein Latex Glove

The unique quality of the MAVIG gloves HS100 are enabled by the usage of elastic natural rubber. Via the manufacturing process it is ensured that the protein content is kept at a minimum level. Water-soluble, allergenic proteins are extracted from the latex so that we are able to refer to our product as low-protein latex gloves.



Sales units are made up of convenient dispenser boxes, each containing 5 pairs of gloves of the same size. Each pair is securely stored in a sterile peelpack with an additional inlay, assuring that the gloves use can be applied in a sterile condition.

This sterile product is intended for single use.

The gloves are easy to put on and are especially tear-resistant due to their elasticity.

In addition, the rolled edge counteracts tearing when pulled over.



### Measured Values

Lead equivalent value: 0.045 mmPb

#### Average reduction of scattered radiation

Skin dose reduction / X-ray tube voltage:

55 % / 60 kV > 45 % / 80 kV > 39 % / 100 kV > 35 % 120 kV

The reduction parameters have been determined in the broad beam, according to DIN EN 61331-1:2016 (IEC 61331-1:2014) and ASTM F 2547-18.

### Sizes and Order Numbers

Size 6.5 – HS10065  
Size 8.0 – HS10080

Size 7.0 – HS10070  
Size 8.5 – HS10085

Size 7.5 – HS10075  
Size 9.0 – HS10090

## Legislation, Standards

**DIN 6815:2021-06** (Regulations for the control of radiation protection of medical X-ray equipment up to 300 kV) This regulation recommends the usage of surgical gloves with radiation protective properties as part of protective clothing for medical staff participating in Angiography, cardiac catheter, neurological, urological, and intra surgical X-ray examinations, as well as CT interventions.

**SV-RL** (Guideline for technical control of X-ray equipment and license required sources of scattered radiation – guideline for authorized expert inspections according to X-ray regulation) The guideline states in inspections for examinations with C-arms, combined imaging and fluoroscopies, that surgical gloves with radiation shielding properties against scattered X-ray radiation are required protection equipment for the radiation user.

The „**Leitlinie zum Einrichten und Betreiben von Herzkatheterlaboren und Hybridoperationssälen/ Hybridlaboren**“ of the German Society for Cardiology - Cardiovascular Research e.V. describes gloves with a shielding effect against stray X-ray radiation as a possible radiation protection measure for the examiners.



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