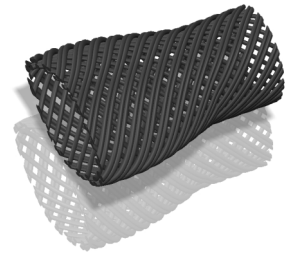


# Expandable Sleeve



## NU-GUARD EMI-HV

NU-GUARD EMI-HV is an electromagnetic protection for electrical wires. It comes directly from our NU-GUARD EMI sleeve, with an orange PET monofilament for high voltage identification for hybrid and electric vehicles.

Its braided construction is made of a mix of tinned copper and saturated polyester monofilaments. This patented design provides an excellent shield against magnetic fields between 300MHz and 1GHz.

NU-GUARD EMI-HV is very flexible and resistant. It provides a good mechanical protection and is particularly suited for automotive applications (self-extinguishing, fluid resistant, resistant to abrasion, impacts, vibrations), where magnetic fields interfere

with signals carried by the wire harness of the car.

Every individual copper strand is tin-plated to ensure corrosion resistance in the long term.

### **Application & Handling:**

No special conditions for handling. Cold cut by scissors, no specific tool required.

The cables are simply threaded through NU-GUARD EMI-HV which forms a smooth fit to contours. A tighter fit on smaller cables can be obtained by stretching the NU-GUARD EMI-HV and securing with cable ties.

For effective shielding, both ends must be grounded and termination can be made by clip or ferrule.



## Characteristics

**Colors:** standard color of the polyester monofilament is orange.

**Materials:** not prohibited or restricted substances. This sleeve is halogen free.

Physical properties	Specification	Unit	Value
Continuous temperature of use	-	°C (°F)	-40/150 (-40/302)
Peak temperature	-	°C (°F)	175 (347)
Relative acceptable humidity	-	%	60
Bending radius	-	-	2x inner diameter
Holes	-	mm	0.5
Optical covering	-	%	about 95
Flammability	FMVSS 302	-	self-extinguishing
Abrasion resistance	-	-	good
Tensile strength	Under a stress of 100N, the EMI electrical and mechanical characteristics will not change. EMI characteristics may vary depending on the braid extension (braiding angle change)		
Chemical resistance	Good resistance to usual automotive atmospheres		

## Dimensions

Designation	Diameter (mm)		Tolerance (mm)	Nominal wall thickness (mm)	Approx. linear resistance* (mΩ/m)	Shielding effectiveness Load 50Ω** (dB)		
	Min.	Max.				300MHz	600MHz	1GHz
NU-GUARD EMI-HV 10 <sup>1</sup>	8	13	± 1.5	0.50	7.8	67	66	63
NU-GUARD EMI-HV 12 <sup>2</sup>	10	16	± 2	0.50	6.5	65	64	60
NU-GUARD EMI-HV 15 <sup>2</sup>	12	18	± 3	0.50	4.5	62	59	56
NU-GUARD EMI-HV 20	19	27	± 4	0.50	4.3	48	48	48
NU-GUARD EMI-HV 30	25	35	± 4	0.50	3.3	68	66	58
NU-GUARD EMI-HV 35	30	40	± 4	0.50	2.6	71	63	58
NU-GUARD EMI-HV 40	30	50	± 4	0.65	1.7	72.5	67	67
NU-GUARD EMI-HV 50	40	60	± 5	0.67	1.1	74	79	76

<sup>1</sup> Supplied with a LDPE former tube.

<sup>2</sup> A plastic former can be added upon request.

\*Nominal diameter on former tube.

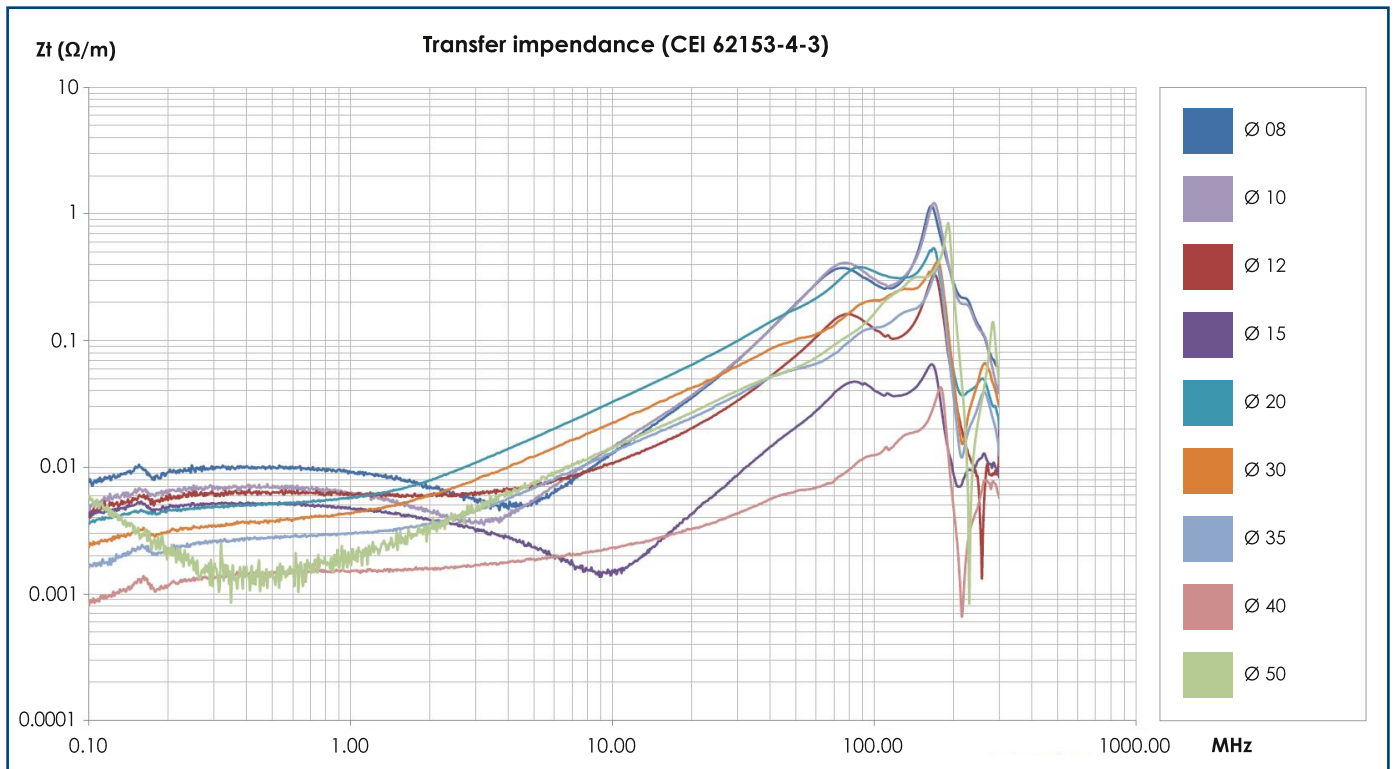
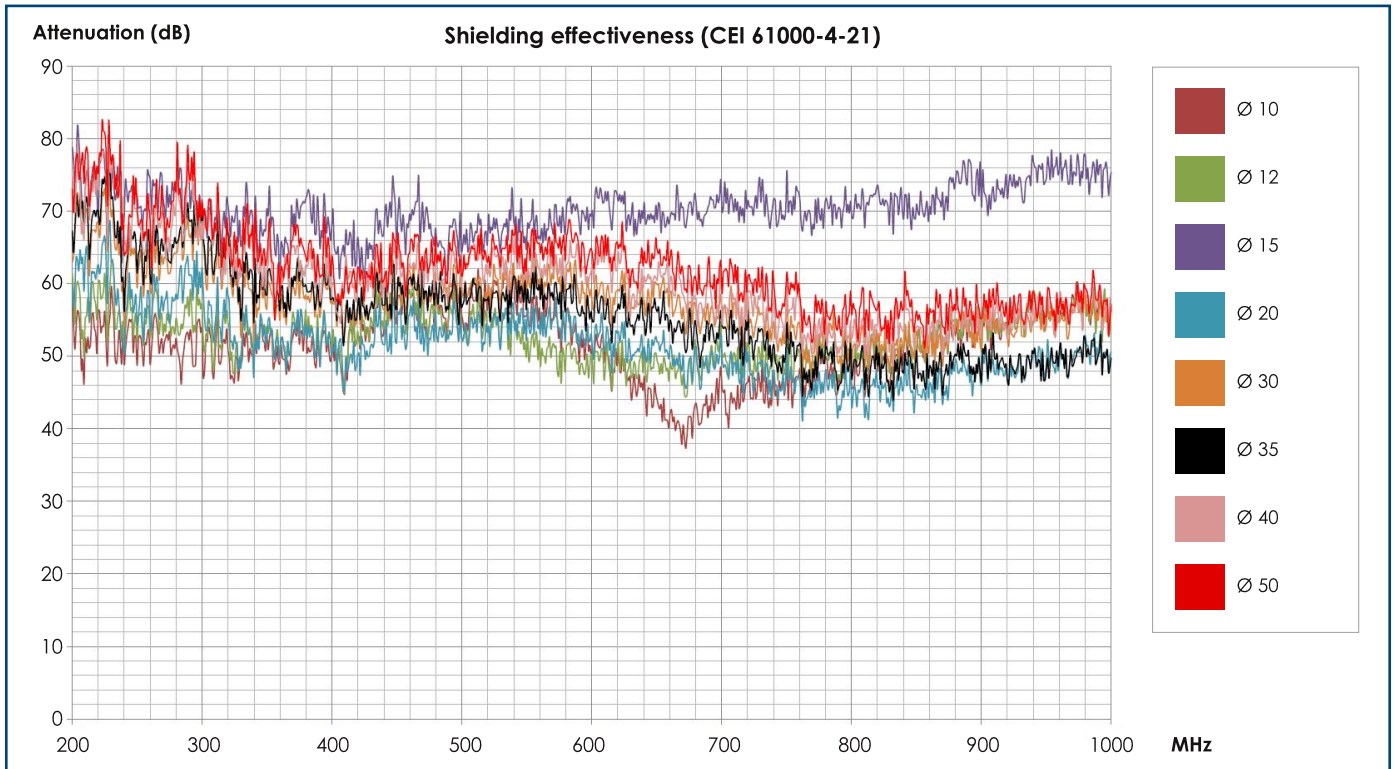
\*\*According to IEC61000-4-21 reverberation chamber test methods.

## Approvals

- Direct: BMW, Iveco/CNH, Renault.

- Via Tier-1: Aixam, Ferrari.

## Shielding Effectiveness



Delfingen\_NU-GUARD\_EMI-HV\_v3.5

## Packaging

NU-GUARD EMI-HV is delivered in coils or in cut lengths upon request.

Data and photos for information only. Delfingen makes no warranties as to the accuracy or completeness of this information. Delfingen reserves the right to make changes in materials or processing without notification.

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