

CONSTRUCTION PRODUCTS REGULATION

FOR SAFER BUILDINGS

DECLARATION OF PERFORMANCE
DOP99981.x-CPR

Unique identification code of
this product type
Declaration identification
number

99981.x-CPR

REFRALAN

Product
name
Manufacturer
name

WIR SORGEN FÜR VERBINDUNG
WE CARE FOR CONNECTION





PROFILE

INFRALAN is a leading manufacturer and system provider of networking and security technology as well as industrial system solutions. Our expertise ranges from structured cabling using certified high-end products for data centres to custom developments for industrial clients.

Our team services customers worldwide from our headquarters in Bielefeld, Germany. Our customer base includes renowned household names from the IT and security industry, as well as medium sized companies and large corporations.

Our membership in the international TKH Group based in the Netherlands, with more than 5,500 employees and production facilities around the globe, gives us additional leverage for the benefit of our customers. The group of companies has 240 employees across eight locations in Europe, five of them in Germany and three subsidiary companies located in Istanbul, Copenhagen and Vienna.

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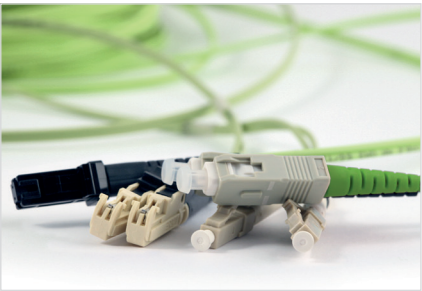
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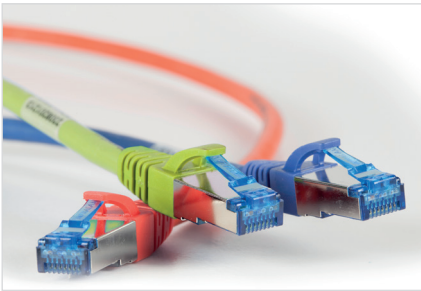
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OVERVIEW OF THE PRODUCT PORTFOLIO



FIBER OPTIC



COPPER CABLING



MULTIMEDIA



ACTIVE COMPONENTS



CABINET SYSTEMS



INDUSTRIAL



SECURITY SOLUTIONS

WHAT ARE CONSTRUCTION PRODUCTS?

The Construction Products Regulation is a regulation of the European Union. Its main aim is to create harmonised product and test standards for construction products across Europe. The Regulation is the legal basis for CE-marking construction products and for issuing declarations of performance.

Construction products are products that are permanently installed in a building and whose performance has an effect on the performance of the building.

Article 2 par. 1 of Regulation (EC) No. 305/2011 says:

‘For the purposes of this Regulation the following definitions shall apply: ‘construction product’ means any product or kit which is produced and placed on the market for incorporation in a permanent manner in construction works or parts thereof and the performance of which has an effect on the performance of the construction works with respect to the basic requirements for construction works’



EU REGULATION

The Construction Products Regulation (CPR), EU Regulation 305/2011, has been in a coexistence period since 1 July 2013, and will completely replace the Construction Products Directive (CPD) on 1 July 2017. The CPR aims to harmonise safety-related aspects. In particular, the Regulation serves to prevent fires spreading and to minimise consequential damage. Power, control and communications cables in buildings are covered by this Regulation. Up until mid-2017, these cables have to be tested according to European test standards in terms of their fire characteristics and assigned to the new Euroclasses.

The EU Construction Products Regulation defines the conditions for CE-marking and requires manufacturers to make a declaration of performance on the following key product characteristics, derived from the protective objectives: fire safety (flame propagation, heat development, smoke development, acid formation and burning droplets).

WHAT IS THE PURPOSE OF THE CONSTRUCTION PRODUCTS REGULATION?

The Construction Products Regulation serves to establish harmonised rules and standards for placing construction products on the market. Every product, no matter whether power, control or communications cables, that is permanently installed in a building comes under this Regulation. The aim of the Construction Products Regulation is to create a Europe-wide, harmonised standard in buildings in order to keep the levels of flame propagation, heat development, smoke development and acid formation in the event of a fire as low as possible.

The Construction Products Regulation introduces a new standard for cables and wiring. This allows national authorities to draw up performance requirements as part of a harmonised European standard. It also gives users of construction products the opportunity to better define their performance requirements.

The fire characteristics of cables

In modern buildings, the huge quantity of cables contributes to the spread of fires. Cables usually undergo flammability testing, but since buildings are getting ever larger and escape routes therefore longer, demands on cables and wiring are increasing. A cable that has passed a test for vertical flame propagation as per EN 60332-1 is deemed by the Construction Products Regulation to have acceptable fire characteristics.

EN 13501-6 presents cables and wiring as comparable to other construction products in order to provide a harmonised set of requirements for buildings and the cables used in them.

Labelling obligation and performance declaration

Every construction product must be labelled as such in order to ensure traceability to the manufacturer. The packaging must have a label with the manufacturer's information, a unique number that refers to the performance declaration, and the CE mark.

A performance declaration reflects certification by an accredited test laboratory and shows that the cable in question meets the requirements of the Construction Products Regulation.

The performance declaration itself must be made available for download on the manufacturer's website. This must also list all the manufacturer's data and all information on fire characteristics and the Euroclass.

EUROCLASSES

The new Euroclasses have been adapted to the specific demands of building sections, such as escape and rescue routes, in order to ensure the highest possible safety in buildings. Buildings are classified in the Model Building Regulation. As they increase in size, so too do the demands on buildings and their components, construction products.

The classification table in the new Construction Products Regulation comprises seven new classes of A_{ca}, non-combustible, through B1_{ca} and B2_{ca}, very hardly inflammable, to F_{ca}, no requirement

Euroclasses overview

Reaction to fire classes Flame propagation, heat development	Additional classes			Security requirements in a building
	Smoke production/density	Acidity development/corrosivity	Flaming droplets/particles	
A _{CA}				very high
B1 _{CA}				very high
B2 _{CA}	s1	a1	d1	very high
C _{CA}	s1	a1	d1	high
D _{CA}	s2	a1	d2	medium
E _{CA}				low
F _{CA}				none

Source: ZVEI – Low fire-hazard cables improve safety (12.10.2016)

Euroclasses are awarded using the criteria of heat development and flame propagation. There are also additional classes for additional requirements such as smoke development (s), burning droplets or particles (d) and fume acidity (a), respectively.

New groupings according to various criteria (heat development and flame propagation etc.) have since been stipulated for power, control and communications cables in buildings. The ZVEI has made recommendations for the cables and fire classes to be used based on this grouping. The rule of thumb applies that the larger the building, the higher the safety requirements.

RECOMMENDATION OF »ZVEI« BASED ON MODEL BUILDING REGULATION

Building classes according to the MBO			Fire classes	
Class	Description		Minimum requirements	
			Building (except for escape routes)	Escape routes
1	detached buildings or detached buildings for agricultural or forestry-related use	up to 7 m, not exceeding a total of 400 m ²	E _{ca}	
2	buildings	up to 7 m, not exceeding a total of 400 m ²	E _{ca}	
3	other buildings	up to 7m	E _{ca}	B2 _{ca} s1 d1 a1
4	other buildings	up to 13m, up to nx400m ²	E _{ca}	B2 _{ca} s1 d1 a1
5	other buildings including underground buildings		C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
Special-purpose constructions				
S1	high-rise buildings	exceeding 22m	C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
S2	construction works	exceeding als 30m	C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
S3	buildings	with the largest floorspace of 1600 m ² , except for residential buildings and garages	C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
S4	sales outlets	exceeding 800m ²	C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
S5	office/administration	rooms exceeding 400m ²	C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
S6	buildings with single rooms	single rooms can be used with more than 100 persons	C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
S7	places of assembly	more than 200 persons	C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
S8	restaurants/hotels	for more than 40 guests in buildings, more than 12 beds, casinos more than 150m ²	C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
S9	buildings with functional units provided for care or assistance dependent people	more than 6 persons, need for intensive care	B2 _{ca} s1 d1 a1	B2 _{ca} s1 d1 a1
S10	hospitals		B2 _{ca} s1 d1 a1	B2 _{ca} s1 d1 a1
S11	other facilities for accommodating people like residences		C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
S12	day-care facilities for children, disabled people and elderly		B2 _{ca} s1 d1 a1	B2 _{ca} s1 d1 a1
S13	schools, universities or similar facilities		C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
S14	penal institution and construction works for psychiatric hospital treatments		C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
S16	leisure/ amusement parks		C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
S18	warehouse shelves with top of the load higher exceeding 7,5 m		E _{ca}	B2 _{ca} s1 d1 a1
S19	construction works for storage of substances with increased fire hazard		B2 _{ca} s1 d1 a1	B2 _{ca} s1 d1 a1

Further classification recommended by the German cable makers' industry				
	industry		C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1
	server rooms		B2 _{ca} s1 d1 a1	B2 _{ca} s1 d1 a1
	road tunnels		B2 _{ca} s1 d1 a1	B2 _{ca} s1 d1 a1
	rail tunnels		B2 _{ca} s1 d1 a1	B2 _{ca} s1 d1 a1
	underground parking		C _{ca} s1 d2 a1	B2 _{ca} s1 d1 a1



INSTALLATION CABLE COMPLY WITH THE REQUIREMENTS OF THE CPR

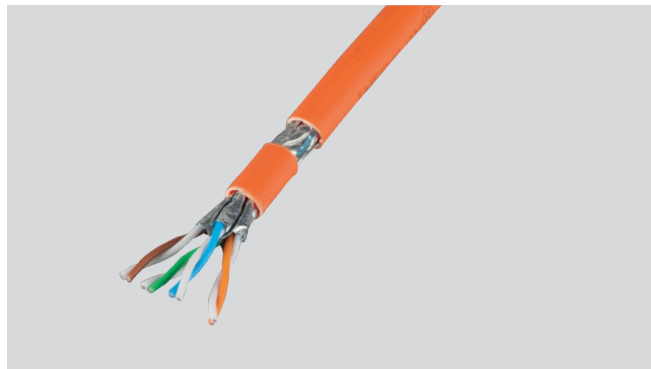
We ensure for our customers that our specially provided cables comply with the requirements of the Construction Products Regulation. The implementation of the standard will be completed shortly. Due to the variety of cables offered, products will be made freely available up to 30 June 2017.

OUR PRODUCTS

Copper cabling

E_{ca}

E_{ca} is the Euroclass with the lowest heat release and flame propagation requirements, offering a low safety level.

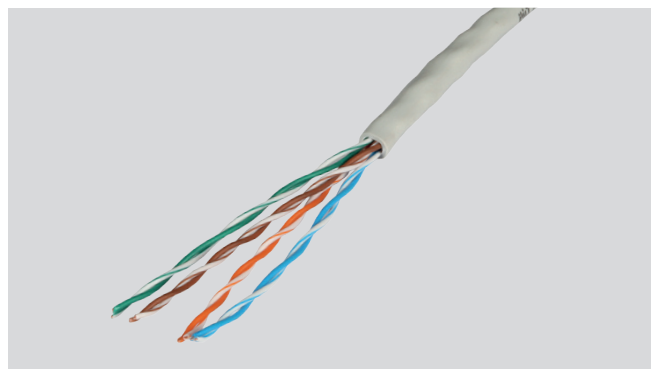


Installation cable for indoor use

Art.-No.	Fire class	Category/ construction	AWG/ material	MHz	Ø in mm	Colour	Type	Lenght types	Brand
99980.x-CPR	E _{ca}	Cat.7/ S/FTP	23/Cu	1000	7,3	orange	simplex	100m, 500m 1000m	INFRALAN®
99980DX.x-CPR	E _{ca}	Cat.7/ S/FTP	23/Cu	1000	7,3x14,6	orange	duplex	100m, 500m	INFRALAN®
99969.305-CPR	E _{ca}	Cat.6/ U/UTP	23/Cu	250	6,3	grey	simplex	305m	ECOLAN®
99969.500-CPR	E _{ca}	Cat.6/ U/UTP	23/Cu	250	6,3	grey	simplex	500m	ECOLAN®
11930515-CPR	E _{ca}	Cat.5e/ U/UTP	24/Cu	100	5,0	grey	simplex	305m	ECOLAN®

D_{ca}

D_{ca} represents a medium level of safety and meets additional requirements such as smoke development, burning droplets or particles and fume acidity.



Installation cable for indoor use

Art.-No.	Fire class	Category/ construction	AWG/ material	MHz	Ø in mm	Colour	Type	Lenght types	Brand
99820.x-CPR	D _{ca}	Cat.6A/ U/UTP	23/Cu	500	6,6	grey	simplex	500m, 1000m	ECOLAN®

C_{ca}

C_{ca} represents a high level of safety and meets additional requirements such as smoke development, burning droplets or particles and fume acidity.



Installation cable for indoor use

Art.-No.	Fire class	Category/ construction	AWG/ material	MHz	Ø in mm	Colour	Type	Lenght types	Brand
99981.x-CPR	C _{ca}	Cat.7/ S/FTP	23/Cu	1000	7,7	orange	simplex	100m, 500m 1000m	INFRALAN [®]
99981DX.x-CPR	C _{ca}	Cat.7/ S/FTP	23/Cu	1000	7,9x16,0	orange	duplex	100m, 500m	INFRALAN [®]
99983.x-CPR	C _{ca}	Cat.7A/ S/FTP	22/Cu	1500	8,5	yellow	simplex	500m, 1000m	INFRALAN [®]
99985.x-CPR	C _{ca}	Cat.7A/ S/FTP	23/Cu	1500	7,8	yellow	simplex	500m, 1000m	INFRALAN [®]
99985DX.x-CPR	C _{ca}	Cat.7A/ S/FTP	23/Cu	1500	7,8x15,6	yellow	duplex	500m, 1000m	INFRALAN [®]

B2_{ca}

B2_{ca} represents a very high level of safety and meets additional requirements such as smoke development, burning droplets or particles and fume acidity.



Installation cable for indoor use

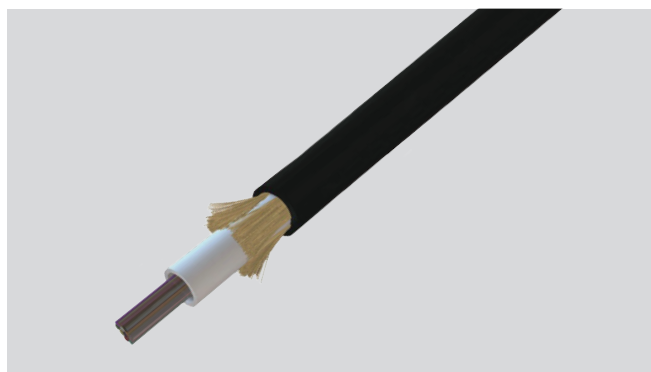
Art.-No.	Fire class	Category/ construction	AWG/ material	MHz	Ø in mm	Colour	Type	Lenght types	Brand
MK7100.x-CPR	B2 _{ca}	Cat.7A/ S/FTP	22/Cu	1200	8,2	orange	simplex	500m, 1000m	INFRALAN [®]
MK7100DX.x-CPR	B2 _{ca}	Cat.7A/ S/FTP	22/Cu	1200	8,2x16,4	orange	duplex	500m	INFRALAN [®]

OUR PRODUCTS

Fiber optic cables



E_{ca} is the Euroclass with the lowest heat release and flame propagation requirements, offering a low safety level.

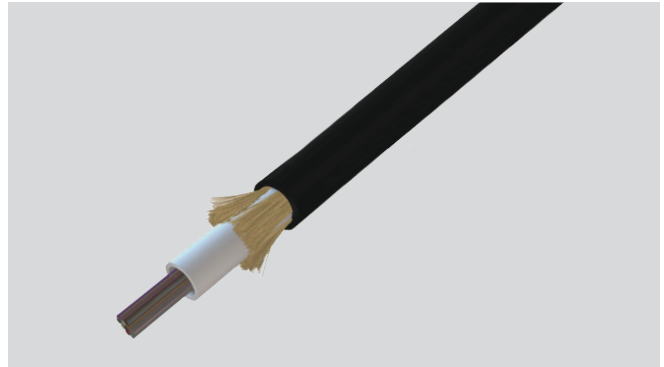


UDQ-Installation cable

Art.-No.	Fire class	Fiber category	Number of fibers	Bending radius	Tensile force	Ø in mm	Colour	Brand
54448.1L-CPR	E _{ca}	G657.A1	48	170	4000	11,2	black	INFRALAN®
54496.1L-CPR	E _{ca}	G657.A1	96	200	4000	13,1	black	INFRALAN®
54548.2L-CPR	E _{ca}	OM4	48	170	4000	11,2	black	INFRALAN®
54548.1L-CPR	E _{ca}	OM3	48	200	4000	11,2	black	INFRALAN®
54248.1L-CPR	E _{ca}	OM2	48	100	4000	11,2	black	INFRALAN®



D_{ca} represents a medium level of safety and meets additional requirements such as smoke development, burning droplets or particles and fume acidity.



UDQ-Installation cable

Art.-No.	Fire class	Fiber category	Number of fibers	Bending radius	Tensile force	Ø in mm	Colour	Brand
54404.1L-CPR	D _{ca}	G657.A1	4	140	1750	7,0	black	INFRALAN®
54408.1L-CPR	D _{ca}	G657.A1	8	140	1750	7,0	black	INFRALAN®
54412.1L-CPR	D _{ca}	G657.A1	12	140	1750	7,0	black	INFRALAN®
54424.1L-CPR	D _{ca}	G657.A1	24	150	1750	7,5	black	INFRALAN®
54504.1OM5-CPR	D _{ca}	OM5	4	140	1750	7,0	black	INFRALAN®
54524.1OM5-CPR	D _{ca}	OM5	24	150	1750	7,5	black	INFRALAN®
54504.2L-CPR	D _{ca}	OM4	4	140	1750	7,0	black	INFRALAN®
54508.2L-CPR	D _{ca}	OM4	8	140	1750	7,0	black	INFRALAN®
54512.2L-CPR	D _{ca}	OM4	12	140	1750	7,0	black	INFRALAN®
54524.2L-CPR	D _{ca}	OM4	24	150	1750	7,5	black	INFRALAN®
54504.1L-CPR	D _{ca}	OM3	4	140	1750	7,0	black	INFRALAN®
54508.1L-CPR	D _{ca}	OM3	8	140	1750	7,0	black	INFRALAN®
54512.1L-CPR	D _{ca}	OM3	12	140	1750	7,0	black	INFRALAN®
54524.1L-CPR	D _{ca}	OM3	24	150	1750	7,5	black	INFRALAN®
54204.1L-CPR	D _{ca}	OM2	4	140	1750	7,0	black	INFRALAN®
54208.1L-CPR	D _{ca}	OM2	8	140	1750	7,0	black	INFRALAN®
54212.1L-CPR	D _{ca}	OM2	12	140	1750	7,0	black	INFRALAN®
54224.1L-CPR	D _{ca}	OM2	24	150	1750	7,5	black	INFRALAN®

Pull-out:

CONSTRUCTION PRODUCTS REGULATION PRODUCT OVERVIEW

Art.-Nr	Fire class	Category/ construction	AWG/ material	MHz	Ø in mm	Colour	Type	Length types	Brand
99980.x-CPR	E _{ca}	Cat.7/ S/FTP	23/Cu	1000	7,3	orange	simplex	100m, 500m 1000m	INFRALAN®
99980DX.x-CPR	E _{ca}	Cat.7/ S/FTP	23/Cu	1000	7,3x14,6	orange	duplex	100m, 500m	INFRALAN®
99969.305-CPR	E _{ca}	Cat.6/ U/UTP	23/Cu	250	6,3	grey	simplex	305m	ECOLAN®
99969.500-CPR	E _{ca}	Cat.6/ U/UTP	23/Cu	250	3,6	grey	simplex	500m	ECOLAN®
11930515-CPR	E _{ca}	Cat.5e/ U/UTP	23/Cu	100	5,0	grey	simplex	305m	ECOLAN®
99820.x-CPR	D _{ca}	Cat.6A/ U/UTP	23/Cu	500	6,6	grey	simplex	500m, 1000m	ECOLAN®
99981.x-CPR	C _{ca}	Cat.7/ S/FTP	23/Cu	1000	7,7	orange	simplex	100m, 500m 1000m	INFRALAN®
99981DX.x-CPR	C _{ca}	Cat.7/ S/FTP	23/Cu	1000	7,9x16,0	orange	duplex	100m, 500m	INFRALAN®
99983.x-CPR	C _{ca}	Cat.7A/ S/FTP	23/Cu	1500	8,5	yellow	simplex	500m, 1000m	INFRALAN®
99985.x-CPR	C _{ca}	Cat.7A/ S/FTP	23/Cu	1500	7,8	yellow	simplex	500m, 1000m	INFRALAN®
99985DX.x-CPR	C _{ca}	Cat.7A/ S/FTP	23/Cu	1500	7,8x15,6	yellow	duplex	500m, 1000m	INFRALAN®
MK7100.x-CPR	B2 _{ca}	Cat.7A/ S/FTP	22/Cu	1200	8,2	orange	simplex	500m, 1000m	INFRALAN®
MK7100DX.x-CPR	B2 _{ca}	Cat.7A/ S/FTP	22/Cu	1200	8,2x16,4	orange	duplex	500m	INFRALAN®

Art.-No.	Fire class	Fiber category	Number of Fibers	Bending radius	Tensile force	Ø in mm	Colour	Brand
54448.1L-CPR	E _{ca}	G657.A1	48	170	4000	11,2	black	INFRALAN®
54496.1L-CPR	E _{ca}	G657.A1	96	200	4000	13,1	black	INFRALAN®
54548.2L-CPR	E _{ca}	OM4	48	170	4000	11,2	black	INFRALAN®
54548.1L-CPR	E _{ca}	OM3	48	200	4000	11,2	black	INFRALAN®
54248.1L-CPR	E _{ca}	OM2	48	100	4000	11,2	black	INFRALAN®

54404.1L-CPR	D _{ca}	G657.A1	4	140	1750	7,0	black	INFRALAN®
54408.1L-CPR	D _{ca}	G657.A1	8	140	1750	7,0	black	INFRALAN®
54412.1L-CPR	D _{ca}	G657.A1	12	140	1750	7,0	black	INFRALAN®
54424.1L-CPR	D _{ca}	G657.A1	24	150	1750	7,5	black	INFRALAN®
54504.1OM5-CPR	D _{ca}	OM5	4	140	1750	7,0	black	INFRALAN®
54524.1OM5-CPR	D _{ca}	OM5	24	150	1750	7,5	black	INFRALAN®
54504.2L-CPR	D _{ca}	OM4	4	140	1750	7,0	black	INFRALAN®
54508.2L-CPR	D _{ca}	OM4	8	140	1750	7,0	black	INFRALAN®
54512.2L-CPR	D _{ca}	OM4	12	140	1750	7,0	black	INFRALAN®
54524.2L-CPR	D _{ca}	OM4	24	150	1750	7,5	black	INFRALAN®
54504.1L-CPR	D _{ca}	OM3	4	140	1750	7,0	black	INFRALAN®
54508.1L-CPR	D _{ca}	OM3	8	140	1750	7,0	black	INFRALAN®
54512.1L-CPR	D _{ca}	OM3	12	140	1750	7,0	black	INFRALAN®
54524.1L-CPR	D _{ca}	OM3	24	150	1750	7,5	black	INFRALAN®
54204.1L-CPR	D _{ca}	OM2	4	140	1750	7,0	black	INFRALAN®
54208.1L-CPR	D _{ca}	OM2	8	140	1750	7,0	black	INFRALAN®
54212.1L-CPR	D _{ca}	OM2	12	140	1750	7,0	black	INFRALAN®
54224.1L-CPR	D _{ca}	OM2	24	150	1750	7,5	black	INFRALAN®



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