

NYLOFIX

NYLOFIX

Conduits and connectors system for electrical cable protection





To our customers and friends:

With this catalogue we present our program of **NYLOFIX** connectors and accessories and our range of **INTERFLEX** flexible corrugated conduits creating an innovative cable protection system for machinery, industrial equipment, car industry and rolling stock.



As pioneers in the introduction in the Spanish market of flexible polyamide corrugated conduits for the electrical installation, we manufacture our own system of conduits and connectors with quick assembly and removal, with excellent characteristics of resistance to traction, impact and fire together with the possibility of obtaining dust and waterproof installations up to IP68.

We have been present in the electrical installation sector for more than 40 years, with a solid reputation for quality and service, and we have made investments in high technology manufacture processes to keep on offering new and competitive products to satisfy our customers.

We have also increased and improved our facilities with the construction of a new warehouse, completely automated and located close to our production and development centre in Montcada i Reixac, that will allow us to improve even more the efficiency of our deliveries.



INTERFLEX, S.A.

NYLOFIX

Conduits and connectors system for electrical cable protection



High traction resistance
(for more Safety)

IP66/IP68 Protection with a single connector
(for more uses/ less stock)



Our innovative patented system stands out of existing ones through **two exclusive differential characteristics:**

Our **NYLOFIX** and **NYLOFIX-PLUS** connectors hold the corrugated conduit all around its entire perimeter. This allows a better distribution of the tensile forces and thus an increase of the installation safety.

Compared with other systems that require a different connector for each IP66, IP68 or IP69K degree of protection, our system allows two watertightness levels with the same connector, by simply adding for the IP68 and IP69K protection an O-ring on the last groove of the conduit special patented profile.

This characteristic offers up to an IP69K protection at a low cost and at the same time reduces the number of references in our customers stock providing noticeable savings and an easier control.

NYLOFIX *plus*

It offers a quick assembly / removal of the conduit thanks to the unique «easy-click» / «easy-unlock» system. With a light manual pressure over unlocking push-ring the conduit is easily removed without help from any tool.

NYLOFIX

Holds the conduit with a threaded head that allows a quick assembly of the conduit.

As specialists in cable protection systems, INTERFLEX goal has always been presenting the latest technological advances to offer the highest easiness and security of installation.

If you wish to obtain more information and details about Nylofix characteristics, please do not hesitate to contact our Technical Department (tecnic@interflex.es) that will kindly help you.



Corrugated conduits use chart

Application areas		Type of conduit to be used		
		Possible	Recommended	
Machinery industry	General purpose	Static	ECT, AGT	STT
		Dynamic	VFT	RBT
	Heavy duty	Static		PST
		Dynamic		FRT
Outdoor use	Static		RBT, FRT	
	Dynamic		RBT, FRT	
Traction Industry	Outdoor use with UV radiation	Static	RBT	FRT
		Dynamic	RBT	FRT
	Outdoor use	Static	IRT, STT	HRT, FRT
		Dynamic	IRT, HRT	FRT
Indoor use	Static	STT	IRT	
	Dynamic			
Automation, robotics	Mobile systems	Dynamic	ECT, AGT, STT	RBT
	Extreme mobile systems	Dynamic		RBT
Shipyards industry	General outdoor use	Static	PST, RBT, HRT	FRT
		Dynamic		RBT, FRT
	Indoor use	Static	AGT, STT	PST, IRT
		Dynamic	AGT, STT	RBT, FRT
Passenger area	Static	AGT, STT	IRT	
	Dynamic			
Others	Electrical and telecommunications installations	Static	ECT	AGT, STT, PST
	Building construction	Static	ECT, AGT, STT	IRT

Corrugated conduits technical characteristics chart

	ECT	AGT	STT	PST	VFT	RBT	IRT	HRT	FRT
Compression force	★	★★	★★★	★★★★	★	★	★★	★★★★	★
Impact resistance	★	★★★	★★★	★★★★	★★★	★★★	★★★	★★★★	★★
Lower temperature range (°C)	-40	-40	-40	-40	-40	-50	-40	-50	-50
Upper temperature range (°C)	105	105	105	105	95	90	105	105	90
Short term temperature peak (°C)	150	150	150	150	120	140	150	150	140
Resistance to bending	flexible	flexible	flexible	flexible	very flexible	very flexible	flexible	flexible	very flexible
Flexion resistance	★★	★★	★★	★	★★★★	★★★★	★★	★	★★★★
Tensile strength	★★★	★★★	★★★	★★★★	★★	★★	★★★	★★★★	★★
LOI Oxygen index (%)	>=24	>25	>25	>27	>24	>24	>34		
Flammability (acc. to UL94)	HB	V2	V2	V2	—	HB	V0		V2
Minimum ND	7	7	7	10	7	7	7	7	7
Maximum ND	48	95	48	48	95	95	48	48	48
In accordance with EN 61386-1/23	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Halogen free	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Not flame propagator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UL RECOGNIZED	Yes*	Yes*	Yes*						

*Except ND 7, ND 70 and ND 95


★★★★ EXCELLENT

★★★ VERY GOOD

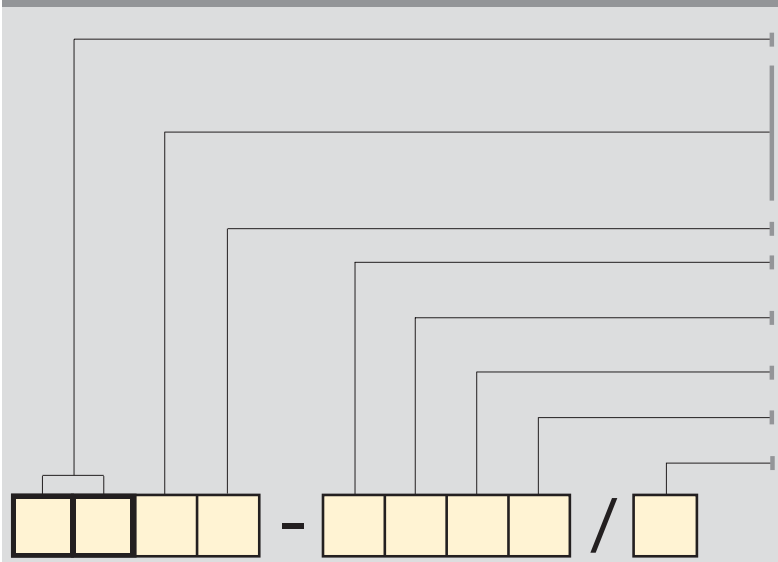
★★ GOOD

★ ACCEPTABLE

 UL recognition according to US standard UL 1696 and Canadian standard C22.2 No. 227.3

 London Underground approved according to LUL standard 2-01001-002

Reference codes



Identification symbols

- C 45° and 90° elbow connectors
- D Distributors
- J Sealing O-rings and washers
- M Fixing clamps
- N Supports
- R Straight connectors
- T Corrugated conduits

M Metallic thread

Nominal diameter of the conduit (ND)

Thread type

- M Metric
- P PG
- N NPT

Thread size

Colour

- G Grey
- N Black

Special performances

- C Slit conduit

Examples:

PG16 thread straight connector NYLOFLEX Plus for ND 17, black colour.
MIR-17P16N Connector.

M40 metallic metric thread 90° elbow curved connector for ND 29 conduit, grey colour.
NBCM-29M40G 90° elbow curved connector.

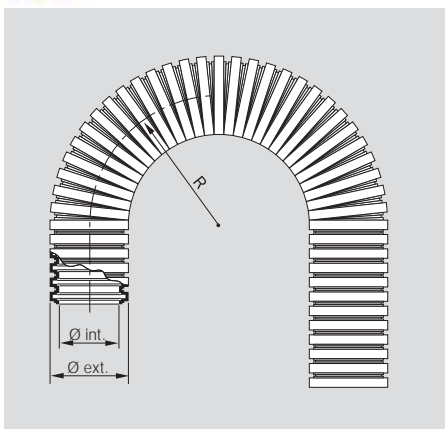
STT DN23 Interflex conduit, grey colour
STT-23G Conduit.



IRT Conduit

Medium-wall and flexible corrugated conduit for insulating and mechanical protection of cables in the electrical installation specially in the passenger areas of railway coaches, railway tunnels or underground stations and general installations with special fire and smoke requirements.

- Made of specially modified polyamide (PA 6).
- Special patented profile for housing the ORJ sealing O-Ring.
- Free of halogen, phosphorus and cadmium.
- Excellent Self-extinguishing.
- Temperature range: -40°C to +105°C. (150°C short time).
- I2F2 according to NF F16-101.



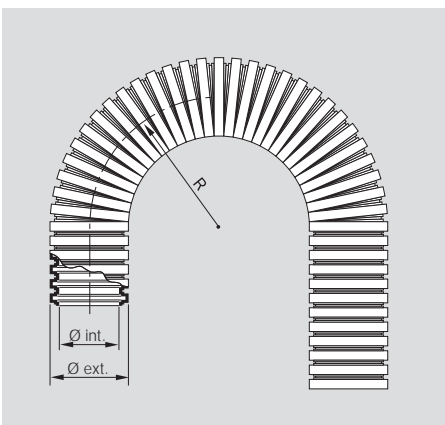
reference		nominal diameter ND	Ø int.	Ø ext.	minimum bending radius R (static)	weight g/m	packing m
GREY	BLACK						
IRT-07G	IRT-07N	7	6.1	10.1	20	20	50
IRT-10G	IRT-10N	10	9.5	13.1	25	27	50
IRT-12G	IRT-12N	12	12.0	15.7	35	38	50
IRT-17G	IRT-17N	17	16.4	21.1	50	63	50
IRT-23G	IRT-23N	23	22.2	28.4	60	101	50
IRT-29G	IRT-29N	29	28.1	34.4	70	134	50
IRT-36G	IRT-36N	36	36.0	42.6	85	168	30
IRT-48G	IRT-48N	48	47.0	54.5	100	234	30

HRT Conduit

Reinforced flexible corrugated conduit for insulating and mechanical protection of cables in the electrical installation, mainly under locomotives and rolling stock and, in general, in static applications in cold temperatures.



- Made of specially modified polyamide (PA 6).
- Special patented profile for housing the ORJ sealing O-Ring.
- Free of halogen, phosphorus and cadmium.
- Self-extinguishing.
- Temperature range: -50°C to +105°C. (150°C short term).



reference		nominal diameter ND	Ø int.	Ø ext.	minimum bending radius R (static)	weight g/m	packing m
GREY	BLACK						
HRT-07G	HRT-07N	7	5.8	10.0	25	25	50
HRT-10G	HRT-10N	10	9.3	13.0	30	31	50
HRT-12G	HRT-12N	12	11.8	15.6	40	42	50
HRT-17G	HRT-17N	17	16.2	21.0	55	70	50
HRT-23G	HRT-23N	23	22.1	28.5	65	120	50
HRT-29G	HRT-29N	29	28.0	34.5	75	150	50
HRT-36G	HRT-36N	36	35.8	42.7	90	190	30
HRT-48G	HRT-48N	48	46.8	54.6	110	250	30

Dimensions in mm

Features

NYLOFIX *plus*

Easy:

Quick assembly and removal

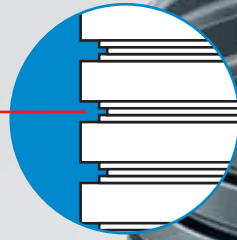
Safe:

Conduit locking around its entire perimeter

Watertight:

Protection up to IP69K

Flexible corrugated conduits of high mechanical strength with special patented profile for housing a sealing O-ring.



Fast identification of the nominal diameter of the conduit.

Twelve flattened edges for tightening with spanner.

Unlocking slope.

Six milled planes for open-ended spanner.

Fast identification of thread type and size.

Easy

Unlocking push-ring.

Safe

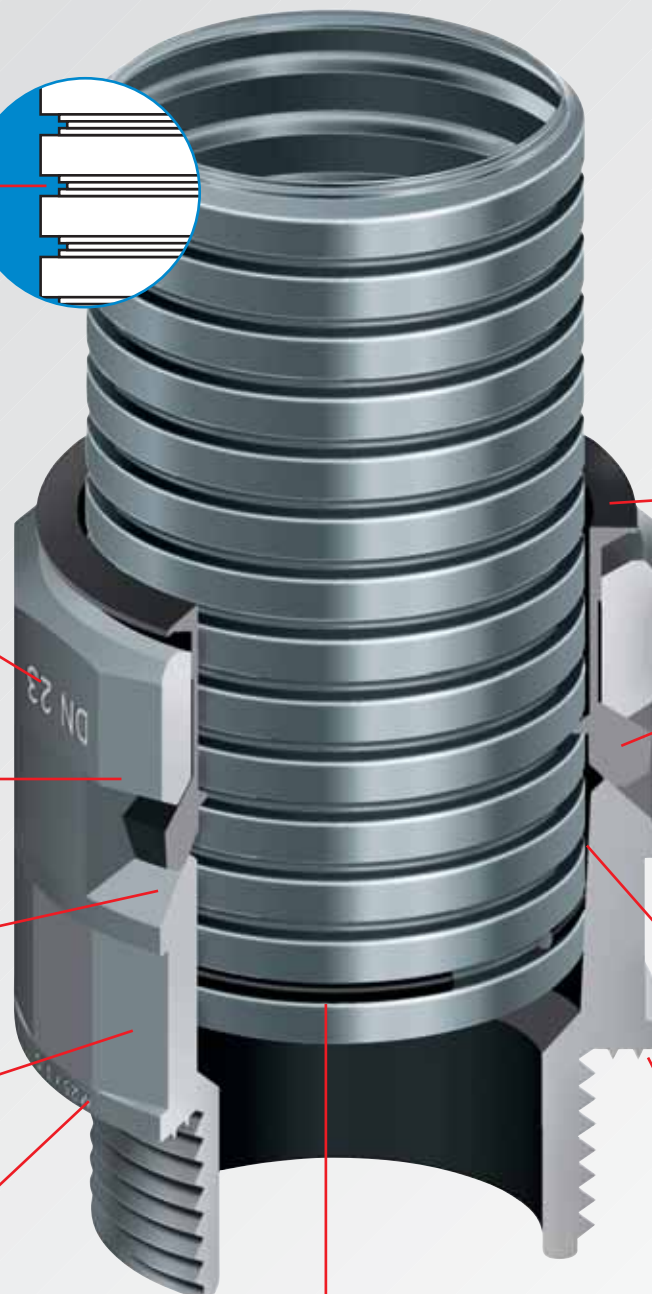
Crown of conduit locking members around the entire perimeter (360°). Maximum tensile strength.

Internal conical housing of the conduit for IP66 protection.

Watertight

Use of standardised O-rings in the first groove for IP68 and IP69K protection.

Connector body with broad contact base and two built-in sealing rings.



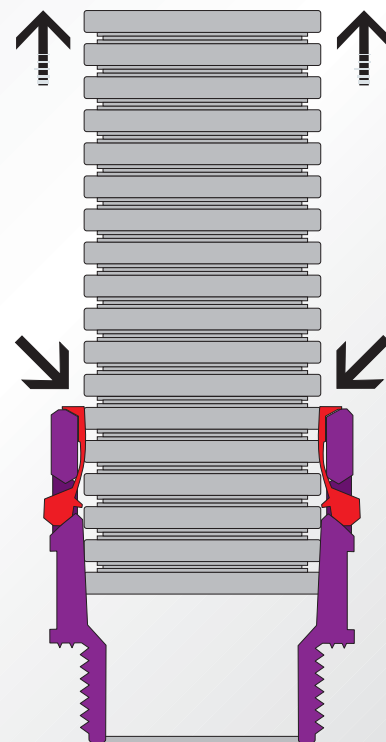
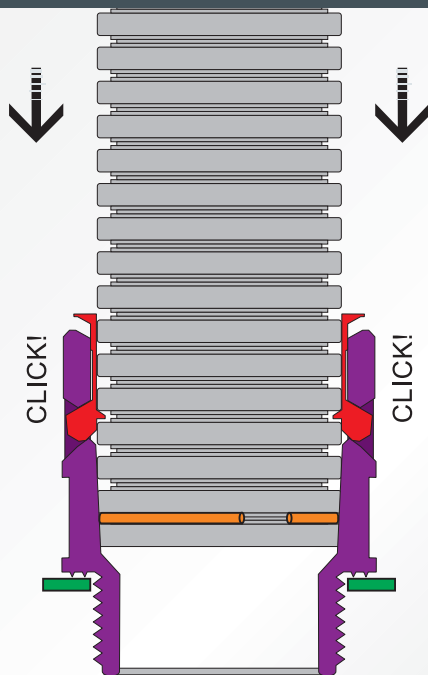
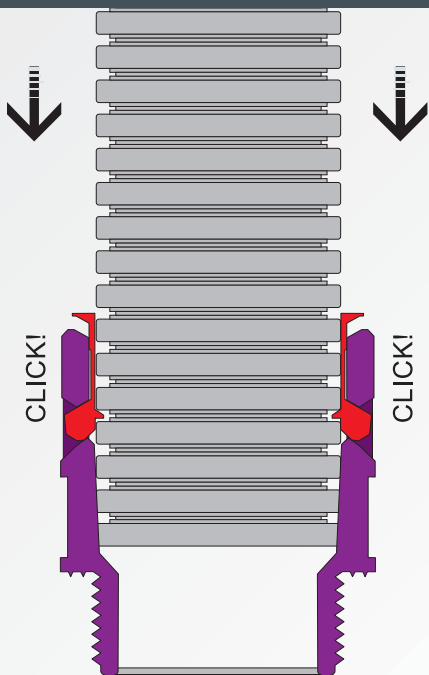
The best performance in only one piece

" Easy click "
quick assembly

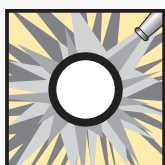
" Easy unlock "
quick removal
without tools

Protection up to IP66

Protection up to IP69K

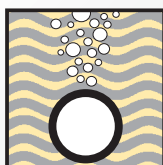


IP66



Insert the conduit all the way into the connector.

IP68



IP69K



Follow the process explained for IP66, though first inserting an **O R J O-ring** on the first groove of the conduit, and a **P L J sealing washer** on the thread at the base of the connector.

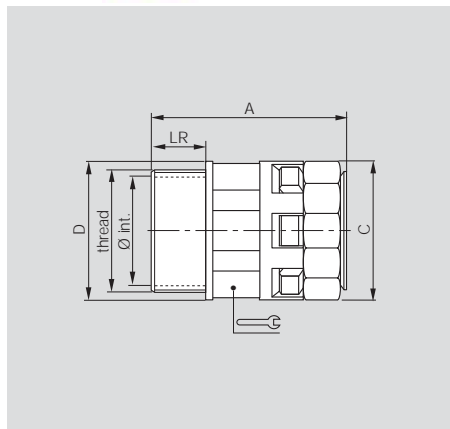
It is extremely easy to remove the tube: press the conduit and the **release ring** against the body of the connector, and then, keeping the **release ring** pressed, pull the conduit outwards, twisting it a little. Both connector and conduit can be reused, following the assembly instructions given.

MIR-M Straight metric thread connector

Straight metric male according to EN 60423 connector for fixing the ends of flexible corrugated conduits to the cable entries on control panels, terminal boxes on electric motors, etc., in accordance with standard EN 60204 (Safety of Machinery). They are notable for their high tensile strength and tightness.



- Made of specially modified polyamide (PA6).
- Free of halogen, phosphorus and cadmium.
- Self-extinguishing.
- Temperature range: -40°C to +105°C. (150°C short term).
- Shock-resistant.
- IP66 protection. IP68 and IP69K with ORJ and PLJ.
- "Easy-click" quick assembly and removal of the conduit without tools.
- Colours: dark grey and black.



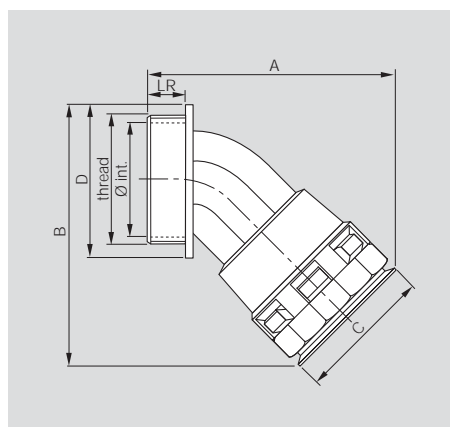
reference	GREY	BLACK	for conduit		Ø int.	A	C	D	LR	weight g	packing u	
			ND	thread								
MIR-07M12G		MIR-07M12N	7	M12x1.5	6.5	35	19	17	15	11	4.6	100
MIR-10M16G		MIR-10M16N	10	M16x1.5	10.0	37	21	21	18	11	6.0	100
MIR-12M16G		MIR-12M16N	12	M16x1.5	10.0	37	26	25	20	11	7.6	100
MIR-12M20G		MIR-12M20N	12	M20x1.5	14.0	37	26	25	20	11	7.8	100
MIR-17M20G		MIR-17M20N	17	M20x1.5	14.5	44	31	30	27	11	12.4	100
MIR-17M25G		MIR-17M25N	17	M25x1.5	18.5	45	31	34	27	12	13.5	100
MIR-23M25G		MIR-23M25N	23	M25x1.5	18.5	48	37	37	34	12	17.5	50
MIR-23M32G		MIR-23M32N	23	M32x1.5	25.5	51	37	42	34	15	19.6	50
MIR-29M32G		MIR-29M32N	29	M32x1.5	25.5	52	46	46	42	15	28.6	30
MIR-29M40G		MIR-29M40N	29	M40x1.5	32.0	56	46	52	42	16	32.4	30
MIR-36M40G		MIR-36M40N	36	M40x1.5	32.0	60	54	54	50	19	42.2	20
MIR-36M50G		MIR-36M50N	36	M50x1.5	42.0	60	54	62	50	19	45.9	20
MIR-48M50G		MIR-48M50N	48	M50x1.5	42.0	61	69	69	66	19	66.9	10
MIR-48M63G		MIR-48M63N	48	M63x1.5	54.0	61	69	75	66	19	72.7	10

LTC-M 45° elbow metric thread connector

45° elbow metric male according to EN 60423 connector for fixing the ends of flexible corrugated conduits to the cable entries on control panels, terminal boxes on electric motors, etc., in accordance with standard EN 60204 (Safety of Machinery). They are notable for their high tensile strength and tightness.



- Made of specially modified polyamide (PA6).
- Free of halogen, phosphorus and cadmium.
- Self-extinguishing.
- Temperature range: -40°C to +105°C. (150°C short term).
- Shock-resistant.
- IP66 protection. IP68 and IP69K with ORJ and PLJ.
- "Easy-click" quick assembly and removal of the conduit without tools.
- Colours: dark grey and black.

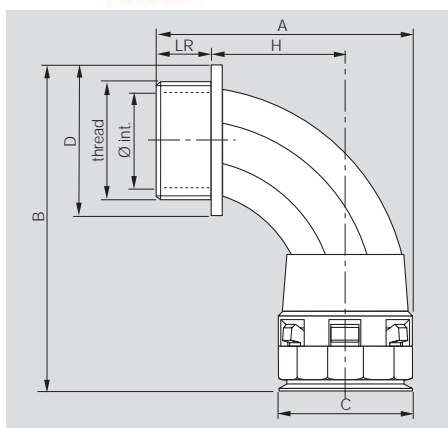


reference	GREY	BLACK	for conduit		Ø int.	A	B	C	D	LR	weight g	packing u
			ND	thread								
LTC-12M16G		LTC-12M16N	12	M16x1.5	10.5	50	45	24	23	11	8.5	50
LTC-17M20G		LTC-17M20N	17	M20x1.5	11.5	60	56	29	27	11	14.2	50
LTC-23M25G		LTC-23M25N	23	M25x1.5	18.5	70	67	37	34	12	21.4	30
LTC-29M32G		LTC-29M32N	29	M32x1.5	25.7	80	76	45	41	15	35.0	10
LTC-36M40G		LTC-36M40N	36	M40x1.5	32.0	96	90	53	50	19	53.0	10
LTC-48M50G		LTC-48M50N	48	M50x1.5	42.0	109	106	67	60	19	80.0	5

Dimensions in mm

NBC-M 90° curved elbow metric thread connector

90° curved elbow metric male according to EN 60423 connector for fixing the ends of flexible corrugated conduits to the cable entries on control panels, terminal boxes on electric motors, etc., in accordance with standard EN 60204 (Safety of Machinery). They are notable for their high tensile strength and tightness.



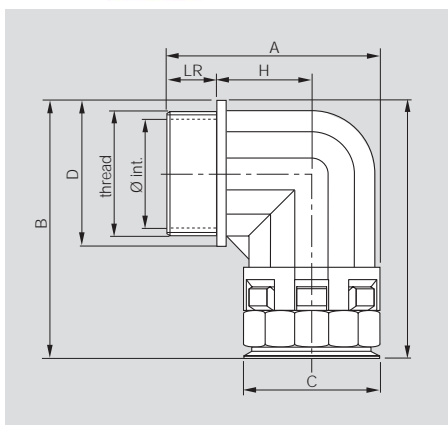
- Made of specially modified polyamide (PA6).
- Free of halogen, phosphorus and cadmium.
- Self-extinguishing.
- Temperature range: -40°C to +105°C. (150°C short term).
- Shock-resistant.
- IP66 protection. IP68 and IP69K with ORJ and PLJ.
- "Easy-click" quick assembly and removal of the conduit without tools.
- Colours: dark grey and black.

reference

GREY	BLACK	for conduit ND	thread	Ø int.	A	B	C	D	H	LR	weight g	packing u
NBC-17M25G	NBC-17M25N	17	M25x1.5	17.5	52	75	28	34	26	12	18.8	50
NBC-23M32G	NBC-23M32N	23	M32x1.5	25.7	69	89	36	40	36	15	32.5	30
NBC-29M40G	NBC-29M40N	29	M40x1.5	32.3	81	101	43	50	40	19	51.4	10
NBC-36M50G	NBC-36M50N	36	M50x1.5	40.0	98	124	51	60	53	19	85.3	10
NBC-48M63G	NBC-48M63N	48	M63x1.5	53.6	106	141	66	75	54	19	128.6	5

NEC-M 90° elbow metric thread connector

90° elbow metric male according to EN 60423 connector for fixing the ends of flexible corrugated conduits to the cable entries on control panels, terminal boxes on electric motors, etc., in accordance with standard EN 60204 (Safety of Machinery). They are notable for their high tensile strength and tightness.



- Made of specially modified polyamide (PA6).
- Free of halogen, phosphorus and cadmium.
- Self-extinguishing.
- Temperature range: -40°C to +105°C. (150°C short term).
- Shock-resistant.
- IP66 protection. IP68 and IP69K with ORJ and PLJ.
- "Easy-click" quick assembly and removal of the conduit without tools.
- Colours: dark grey and black.

reference

GREY	BLACK	for conduit ND	thread	Ø int.	A	B	C	D	H	LR	weight g	packing u
NEC-10M16G	NEC-10M16N	10	M16x1.5	10.0	35	42	21	21	11	11	8.9	50
NEC-12M16G	NEC-12M16N	12	M16x1.5	10.5	39	44	25	23	15	11	13.7	50
NEC-12M20G	NEC-12M20N	12	M20x1.5	12.3	39	45	25	26	15	11	13.3	50
NEC-17M20G	NEC-17M20N	17	M20x1.5	14.5	45	58	30	30	18	11	22.4	50
NEC-23M25G	NEC-23M25N	23	M25x1.5	18.5	53	66	36	37	23	12	34.2	30
NEC-29M32G	NEC-29M32N	29	M32x1.5	25.5	66	76	45	46	27	15	57.0	20
NEC-36M40G	NEC-36M40N	36	M40x1.5	32.0	79	89	54	55	33	19	93.0	10
NEC-48M50G	NEC-48M50N	48	M50x1.5	42.0	92	103	68	69	39	19	153.2	10

Dimensions in mm

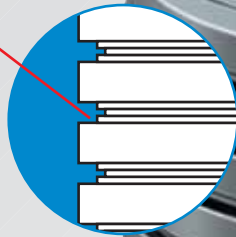
Safe:

Conduit locking around its entire perimeter

Watertight:

Protection up to IP68

Flexible corrugated conduits of high mechanical strength with special patented profile for housing sealing O-rings.

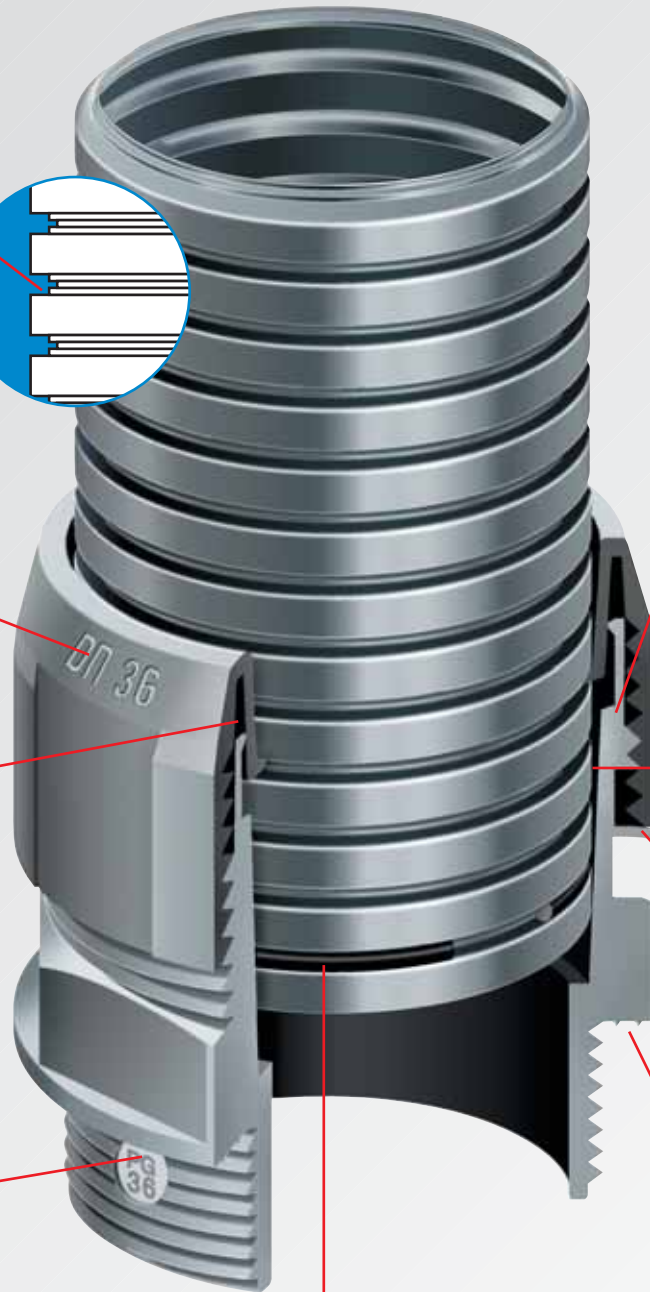


Fast identification of the nominal diameter of the conduit.

Safe

Crown of conduit locking members around the entire perimeter (360°). Maximum tensile strength.

Fast identification of thread type and size.



Connector compatible with the various conduit pitches in the market. With a system for conduit progression within the connector to compensate such differences.

Conical housing for IP66 protection.

Retainer for positioning and locking the connector head.

Connector body with broad contact base and two built-in sealing rings.

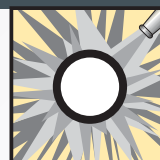
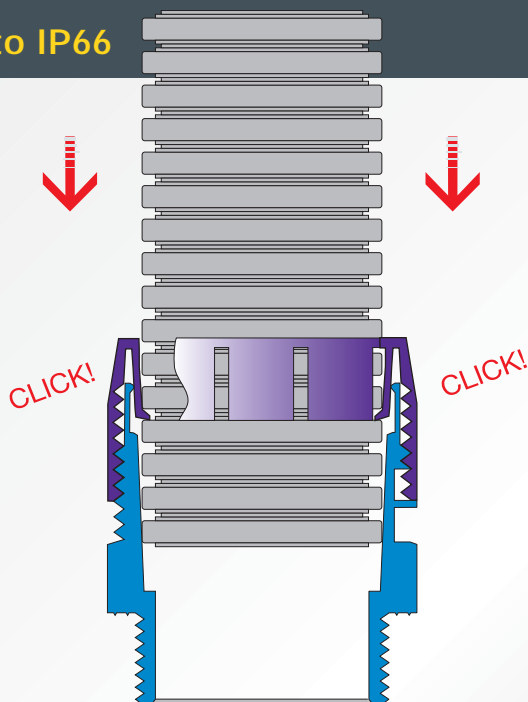
Watertight

Use of standardised O-rings in the first groove for IP68 protection.

Two degrees of protection IP66 and IP68 with the same connector

Protection up to IP66

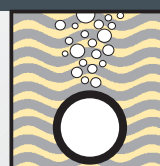
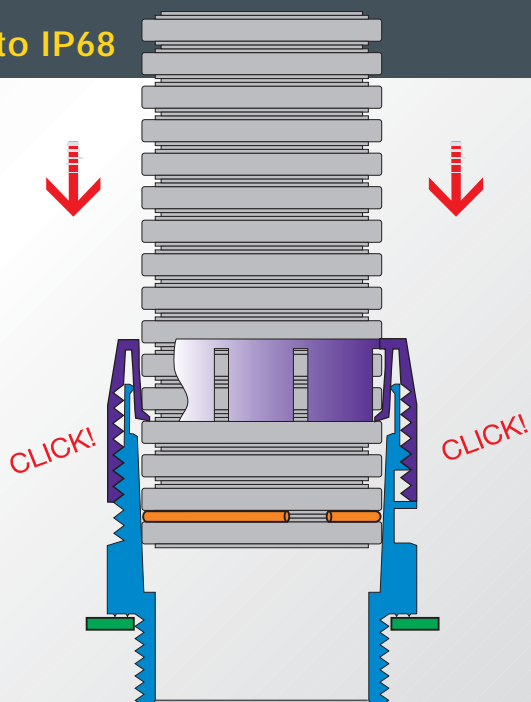
IP66



Insert the conduit all the way to the bottom of the internal cone of the connector, and turn the head clockwise.

Protection up to IP68

IP68



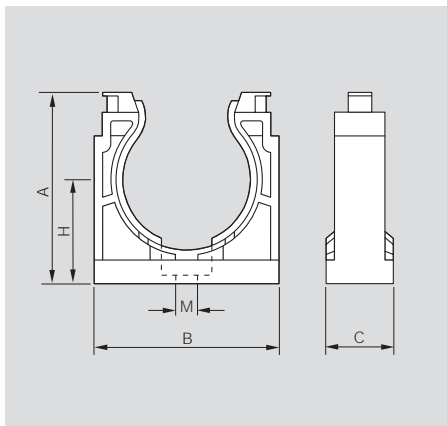
Follow the above mentioned process inserting an **ORJ o-ring** into the first groove of the conduit end and a **PLJ sealing washer** on the thread at the base of the connector.

SDN Support

Supports for securing sections of corrugated conduits between the various parts of the electrical installation on machines. With conduit entry guide and notches for setting an adjustable cable-tie under special securing situations, e.g. on ceilings.



- Made of specially modified polyamide (PA6).
- Free of halogen, phosphorus and cadmium.
- Self-extinguishing.
- Shock-resistant.
- Temperature range: -40°C to +105°C. (150°C short term).
- Colours: dark grey and black.



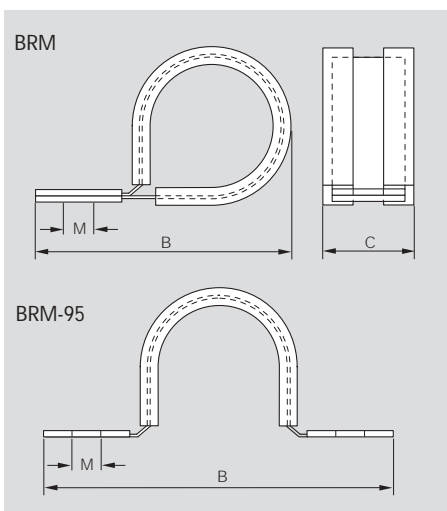
reference		for conduit ND	A	B	C	H	bolt M	recommended cable-tie	weight g	packing u
GREY	BLACK									
SDN-07G	SDN-07N	7	20	17	20	12	M4	75 x 2.5	2.2	100
SDN-10G	SDN-10N	10	23	21	20	14	M5	75 x 2.5	2.8	100
SDN-12G	SDN-12N	12	26	25	20	15	M5	75 x 2.5	3.6	100
SDN-17G	SDN-17N	17/18	32	32	20	18	M5	140 x 3.5	5.8	100
SDN-23G	SDN-23N	23	41	40	20	23	M6	140 x 3.5	9.4	50
SDN-29G	SDN-29N	29	47	46	20	26	M6	160 x 4.5	10.8	30
SDN-36G	SDN-36N	36	57	56	20	32	M6	160 x 4.5	15.4	20
SDN-48G	SDN-48N	48	70	70	20	39	M6	180 x 4.5	21.0	10

BRM Clamp

Clamps for securing sections of corrugated conduits between various parts of the electrical installation on machines.



- Galvanised steel with elastomer protection.
- Free of halogen, phosphorus and cadmium.
- Provide good resistance to atmospheric agents and corrosion.
- Black colour.



reference	for conduit ND	B	C	bolt M	weight g	packing u
BRM-07	7	25	12	M4	6.0	50
BRM-10	10	26	12	M4	6.8	50
BRM-12	12	29	12	M4	7.6	50
BRM-17	17/18	39	16	M5	9.0	50
BRM-23	23	47	16	M5	21.4	50
BRM-29	29	60	19	M6	24.2	30
BRM-36	36	70	19	M6	29.2	20
BRM-48	48	85	19	M6	37.2	10
BRM-70	70	117	31	M8	142.6	10
BRM-95	95	155	26	M8	79.8	10

Dimensions in mm

O-Rings

for conduits: **ORJ**

for BTC connectors: **BTJ**

for TITAN connectors: **TTJ**

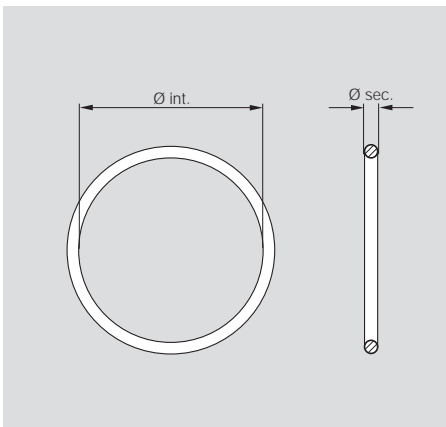
ORJ O-rings to be placed on the first groove at the end of INTERFLEX corrugated conduits in order to obtain a degree of protection up to IP68 between the conduit and the connector.

BTJ O-rings to be placed on the 90° BTC flange connector base groove to obtain a degree of protection up to IP68.

TTJ O-rings to be placed on TITAN connector base groove to obtain a degree of protection up to IP68.



- NBR 70 elastomer.
- Temperature range: -30°C to +100°C.



O-rings for the conduit: ORJ

reference	for conduit ND	Ø int.	Ø sec.	weight g	packing u
ORJ-07	7	6.35	1.3	0.05	100
ORJ-10	10	10.0	1.3	0.06	100
ORJ-12	12	11.5	1.5	0.10	100
ORJ-17	17/18	16.0	1.8	0.18	100
ORJ-23	23	22.0	2.0	0.30	50
ORJ-29	29	29.0	2.0	0.39	30
ORJ-36	36	34.0	2.3	0.56	20
ORJ-48	48	44.6	2.4	0.84	10
ORJ-70	70	70.0	4.0	3.70	5
ORJ-95	95	98.0	4.5	6.50	5

O-rings for BTC 90° elbow flange connector: BTJ

reference	for connector	Ø int.	Ø sec.	weight g	packing u
BTJ-17	BTC-17..	32.0	2.5	0.66	50
BTJ-23	BTC-23..	41.0	2.5	0.84	30
BTJ-29	BTC-29..	51.0	2.5	1.02	10
BTJ-36	BTC-36..	60.0	2.5	1.34	10
BTJ-48	BTC-48..	66.0	2.5	1.44	5

O-rings for TITAN connectors: TTJ

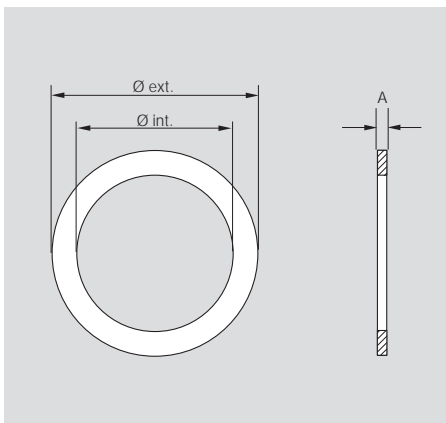
reference	for connector	Ø int.	Ø sec.	weight g	packing u
TTJ-70	GTR-70, GTC-70	90	2.5	1.8	5
TTJ-95	GTR-95, GTC-95	117	2.5	2.2	5

PLJ Sealing washers

Die-cut sealing washers that allow the entry of cables into housings (boxes, cabinets, etc.) with a degree of protection up to IP68 between the housing and the connector's base.



- Made of deformable asbestos-free material.
- Temperature range: -40°C to +200°C.



reference	for thread	Ø int.	Ø ext.	A	weight g	packing u
PLJ-M12	M12x1.5	12.0	18	1.5	0.32	100
PLJ-M16	M16x1.5	16.0	22	1.5	0.42	100
PLJ-M20	M20x1.5	20.0	27	1.5	0.62	100
PLJ-M25	M25x1.5	25.0	35	1.5	1.25	50
PLJ-M32	M32x1.5	32.0	43	1.5	1.63	30
PLJ-M40	M40x1.5	40.0	55	1.5	2.93	20
PLJ-M50	M50x1.5	50.0	69	1.5	4.75	10
PLJ-M63	M63x1.5	63.0	82	1.5	3.34	10
PLJ-P07	Pg 7	12.4	18	1.5	0.36	100
PLJ-P09	Pg 9	15.2	21	1.5	0.44	100
PLJ-P11	Pg 11	18.6	26	1.5	0.70	100
PLJ-P13	Pg 13.5	20.4	29	1.5	0.64	100
PLJ-P16	Pg 16	22.5	33	1.5	1.24	100
PLJ-P21	Pg 21	28.3	39	1.5	1.56	50
PLJ-P29	Pg 29	37.0	49	1.5	2.23	30
PLJ-P36	Pg 36	47.0	59	1.5	1.18	20
PLJ-P48	Pg 48	59.3	71	1.5	2.56	10

Dimensions in mm

Degrees of IP protection

According to EN 60529, the degree of ingress protection (tightness) is shown by two characteristic figures after the letters IP.

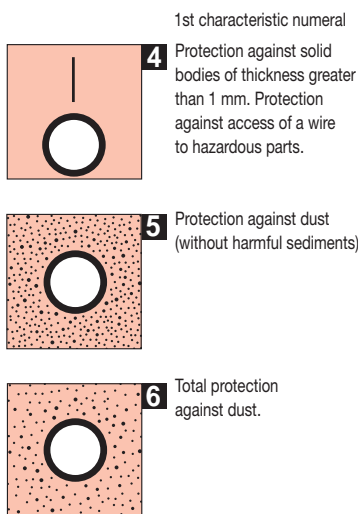
The first characteristic numeral refers to protection of persons against access to dangerous parts of the equipment and, simultaneously, protection of the equipment offered by the conduit-connector-housing unit, against the ingress of solid foreign bodies.

The second characteristic numeral refers to the protection offered by the conduit-connector-housing unit against harmful effects on the equipment due to the ingress of water.

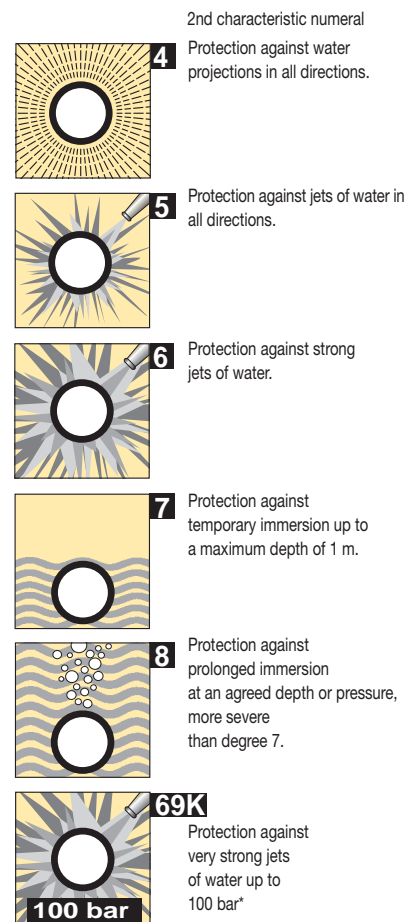
In the table on the right, the degrees of protection lying outside the sphere of cable protection systems have been omitted.

* IP69K protection is specified according to DIN 40050-9: 1993 standard.

Protection against the ingress of foreign solid bodies



Protection against the ingress of water



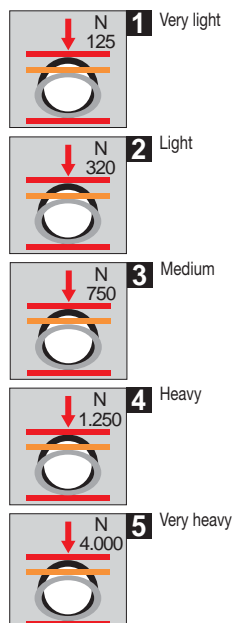
Mechanical resistance of the conduits according to EN 61386-1/23

Compression resistance

Characteristic numeral /classification

Resistance of the circular section of the conduit to deformation induced by a particular compression force.

The difference between the initial outside diameter and the diameter of the flattened sample shall not exceed 25% of the initial outside diameter measured before the test.



Impact resistance

Characteristic numeral /classification

Resistance of the conduit to the impact of a hammer falling from a certain height.

The characteristic numeral classifies the tests in accordance with the resulting impact energy expressed in Joules, being a product of the kg mass of the hammer and the height of fall in decimeters.

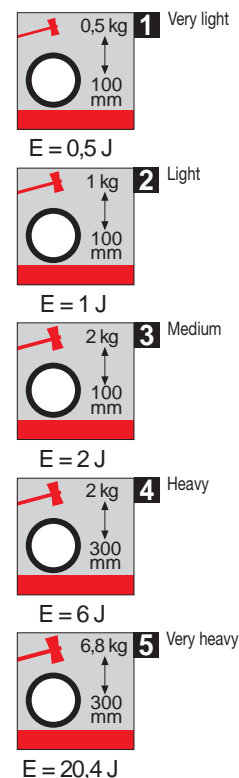


Table of resistance to chemical agents

	PA6	PA12		PA6	PA12
Oil ASTM N° 1, 20°C	R	R	Spark erosion liquids	R	R
Oil ASTM N° 2, 20°C	R	R	Ether	R	R
Oil ASTM N° 3, 20°C	R	R			
Lubricating oils	R	R	Fuel oil	R	R
Vegetable oils	R	R	Diesel oil	R	R
Transformer oils	R	R	Petrol	R	R
Silicone oils	R	R	Glycol	R	R
Hydraulic oils mineral basis	R	R	Glycerine	R	R
Cutting oils	R	R	Glucose, diluted	R	R
Ethyl acetate	R	R			
Acetamide, 50% aq.soln.	R	R	Magnesium hydroxide, 10% aq.soln.	R	R
Acetone	R	R			
Acetic acid, 10% aq.soln.	N	L	Fruit juices	R	R
Boric acid, 10% aq.soln.	L	R			
Butyric acid	L	R	Methyl ethyl ketone	R	R
Hydrogen chloride <2% aq.soln.	N	L			
Chromic acid, 1% aq.soln.	N	L	Urine	R	R
Formic acid, 10% aq.soln.	N	N	Ozone (gaseous), all concentr.	N	N
Phosphoric acid, 10% aq.soln.	N	L			
Lactic acid, 5% aq.soln.	L	R	Perchloroethylene	R	R
Nitric acid, all conc.	N	N	Petroleum	R	R
Sulphuric acid, 2% aq.soln.	N	L	Potassium hydroxide, 50% aq.soln.	R	R
Tartaric acid, 10% aq.soln.	R	R	Propane (gaseous)	R	R
Fatty acids	R	R			
Sea water	R	R	Common salt, all concentr.aq.	R	R
Turpentine	R	R	Tallow	R	R
Ethanol	R	R	Soap solution	R	R
Methanol	R	L	Sodium hydroxide, 40% aq.soln.	R	R
Starch, aq.	R	R	Copper sulphate, 10% aq.soln.	L	R
Ammonia, 10% aq.soln.	R	R	Carbon disulfide	R	R
Aniline	L	L			
			Drilling oils	R	R
Bencene	R	R	Carbon tetrachloride	R	R
Butane (gaseous)	R	R	Toluene	R	R
			Triclorethylene	L	L
Beer	R	R			
Potassium cyanide, soln.	R	R	Vinegar	L	R
Calcium chloride, 10% aq.soln.	L	R			
Ferric chloride, 10% aq.soln.	N	N	Xilene	R	R
Potassium chlorate, 5% aq.soln.	L	R			
Sodium chloride, all conc. aq.	R	R	White spirit	R	R

R = resistant
L = limited resistance
N = not resistant