

# Conduit Systems - Polyamide

## NCV Standard Weight - Low Fire Hazard



### Technical Characteristics

Conforms to	EN 45545-2 HL3 NFR 16-101 I2, F2 UNI CEI 11170 (LR3/LR4) CE Low voltage directive RoHS Compliant
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Approvals and Standards	 
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Degree of mechanical protection	High flexibility & abrasion, impact and shock resistance, medium fatigue life.
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Degree of protection	IP40 - Hinged fittings IP67 - Sealed fittings
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UV protection	Very High
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Finish	Black (BL)
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Application	High specification automotive harness applications
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Normal operating temperature range	Application	Min Temp	Max Temp
	Static	- 40°C	+120°C
	Dynamic	- 5°C	+120 °C

For use with - Fitting range	For use with all <a href="#">hinged</a> and <a href="#">sealed</a> fittings in the Harnessflex range
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Fire performance	Test Standard	Performance Rating	
	IEC 61386-1	Pass	
	UL94	V0	Self Extinguishing & Halogen Free
	ISO 4589-2	34.3%	
	IEC 60695	850°C	

Testing data	Click or See pages <a href="#">3</a> & <a href="#">4</a>
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Type of material	Polyamide (Nylon) 6 - flame retardant - heat stabilised
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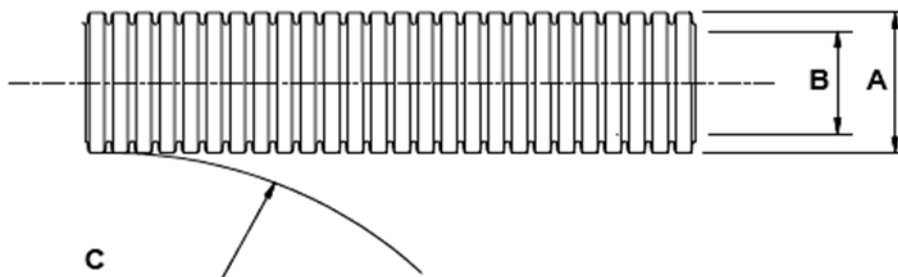
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### Technical & Dimensional Data

Part No.	Conduit Size		Dimensions				Average Weight (Kg/100m)
	(NC)	(NW)	(A) Outside Diameter (Mid size)	(B) Minimum Bore	(C) Minimum Static Bend Radius	Reel Length (m)	
NCV06	06	4.5	7.2mm	4.5mm	10mm	100	0.9
NCV08	08	7.5	9.8mm	6.2mm	20mm	100	1.9
NCV10	10	8.5	11.5mm	8.0mm	23mm	100	2.1
NCV12	12	10	13.0mm	9.6mm	26mm	100	2.4
NCV16	16	13	16.0mm	11.7mm	32mm	100	4.1
NCV20	20	17	21.2mm	16.3mm	42mm	50	5.6
NCV25	25	22	25.3mm	21.3mm	52mm	50	7.4
NCV28	28	23	28.5mm	22.5mm	57mm	50	9.0
NCV32	32	29	34.5mm	28.6mm	79mm	50	12.2

To order quote part number, colour & reel length, e.g NCV20/50m



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### Mechanical Properties

Test Type	Methods / Standards	Requirements	Value
Crush Strength	IEC61386-1	<25% crush >90% recovery	>320N
Tensile Strength	IEC61386-1	Fitting Pull off (Hinged Fitting)	100N
Impact Strength @ 23 °C	IEC61386-1	No Cracks <20% deformation min value	>20J
Impact Strength @-5 °C	IEC61386-1	No Cracks. <20% deformation min value	>6J
Dynamic Bend radius @-5 °C	IEC61386-23	5000 cycles minimum	4xOD

### Thermal Properties

Test Type	Methods / Standards	Requirements	Value
Minimum Temperature	IEC61386-23	Permanent Use	-40°C
Minimum Temperature		Dynamic Use (5000 cycles)	-5°C
Maximum Temperature		Permanent Use (30,000) Hours	120°C
Short Term Temperature		Temporary Use (3,000) Hours	150°C
Short Term Temperature		Permanent Use (200) Hours	170°C

### Chemical Resistance Chart

Key:	●	●	●	●
Suitable :	●	●	●	●
Limited Suitability :	●	●	●	●
Unsuitable :	●	●	●	●
Not Tested :	●	●	●	●

● Astm No.1	● Diesel oil	● Methyl Bromide	● Sulphur Dioxide (Gas)
● Astm No.2	● Diethylamine	● MEK	● Sulphuric Acid (10%)
● Astm No.3	● Ethanol	● Nitric Acid (10%)	● Sulphuric Acid (70%)
● Acetic Acid (10%)	● Ether	● Nitric Acid (70%)	● Toluene
● Acetone	● Ethylamine	● Oxalic Acid	● Transformer Oil
● Aluminium Chloride	● Ethylene Glycol	● Ozone (Gas)	● 1,1,1-Trichloroethane
● Aniline	● Ethyl Ethanoate	● Paraffin oil	● Trichloroethylene
● Benzaldehyde	● Freon 32	● Petrol	● Turpentine
● Benzene	● Hydrochloric Acid (10%)	● Phenol	● Vegetable Oil
● Carbon tetrachloride	● Hydrochloric Acid (36%)	● Sea Water	● Vinyl Acetate
● Chlorine water	● Hydrogen Peroxide (35%)	● Silver Nitrate	● Water
● Chloroform	● Hydrogen Peroxide (87%)	● Skydrol	● White Spirit
● Citric Acid	● Lactic Acid	● Sodium Chloride	● Zinc Chloride
● Copper Sulphate	● Lubricating oil	● Sodium Hydroxide (10%)	
● Cresol	● Methanol	● Sodium Hydroxide (60%)	

The information above is given as a guide only and is based on published technical data and experience. The chemical resistance of the above products is dependant on factors such as chemical exposure, concentration of the chemical and temperature. The above chemicals are valid for a temperature of 23°C. Use of the above table is at the users own discretion and risk. Those using it must satisfy themselves that their application presents no health and safety risks. The end user should assess compatibility with their application and contact Thomas & Betts for further information.

ADHERENCE TO THE CURRENT WIRING REGULATIONS BS7671 OR NEC WIRING REGULATIONS (FOR USA) IS STRONGLY ADVISED.

MINIMUM BEND RADIUS FOR FLEXING IS DEPENDANT UPON MINIMUM TEMPERATURE, BENDING FREQUENCY AND CHEMICAL ENVIRONMENT.

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### Flammability

Test Type	Method / Standard	Requirement	Result	Unit
Oxygen Index	ISO 4589-2	% Oxygen to support combustion	34.3	%
Glow Wire Rating	IEC 60695	No Ignition to Extinguish with 30s	850	°C
Flammability	UL94	Vertical (V0,V2) or Horizontal (HB)	V0	
Flammability	IEC 61386-1	1Kw Burner @ 45° Vertical burn	Pass	Pass/Fail
Flammability	FMVSS3042	≤100mm/min	0	mm/min

### Toxicity

Test Type	Method / Standard	Requirement	Result	Unit
Halogen Free		<0.5%	Pass	Pass/Fail
Phosphorous Free		<0.5%	Pass	Pass/Fail
Sulphur Free		<0.5%	Pass	Pass/Fail

### Pre Test Conditions

Duration	Standard	Temperature	Relative Humidity
168 (Hours)	BS EN IEC61386	23 (°C)	50 (%)