CARROLL
A BRADY BUSINESS

TECHNICAL DATA SHEET

Carroll Australasia is the authorised distributor for the Harnessflex products in Australia and New Zealand (ANZ). We are a specialist stockist of the Harnessflex specialised range of flexible conduit systems, fittings, backshells and more.

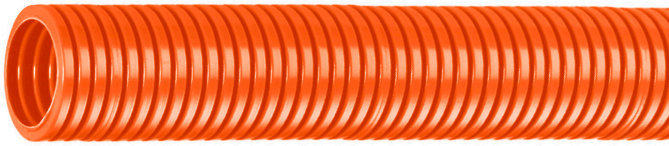
HARNESSFLEX EVO™ CONDUIT - NC

STANDARD WEIGHT – GENERAL PURPOSE CONDUIT

Harnessflex

Flexible standard weight, nylon (PA 6) conduit.

Ideal for Electric Vehicle general purpose harness applications.



Features & Benefits:

- Standard weight - General purpose conduit
- High flexibility & fatigue life
- Very high abrasion, impact and shock resistance
- Able to withstand extremes of temperatures and resistant to automotive oils and solvents
- Self-extinguishing, low smoke toxicity and halogen Free
- Very high UV resistance
- Available in orange (RAL 2003)

Applications:

- Suited to high risk impact applications
- Extensively used in harnesses on HGV and off road vehicle applications where a superior protection against impact and mechanical shock is preferred
- The conduit is used for both chassis and engine applications and can be used in a wide range of temperatures

Temperature range:

- Static applications: -40°C to +120°C
- Moving applications: -15°C to +120°C
- Short term: +150°C

UV Resistance:

- High

Material/Materials/Finishes:

- Polyamide (Nylon) PA 6 - heat and UV stabilised

Ingress protection:

- For use with all hinged and sealed fittings in the Harnessflex range
- IP40 - Hinged fittings, NC Slit (IP40 only)
- IP67 - Sealed fittings
- IP68 (10 bar 30 mins) - Sealed fittings

Conforms to:

- CE marked to Low Voltage Directive 2014/35/EU
- ADR / GGVS Approved
- RoHS Compliant to 2011/65/EU
- Conforms with end of life vehicle directive (ELV) EU200/53/EC
- FMVSS302

Fire performance:

Test standard	Performance rating
IEC 61386-1	Pass
UL94	HB
FMVSS302	0 mm/min

Degree of mechanical protection:

- High flexibility & fatigue life

Chemical resistance:

- High chemical resistance levels

Carroll Australasia Pty Ltd reserves the right to change specifications without notice.

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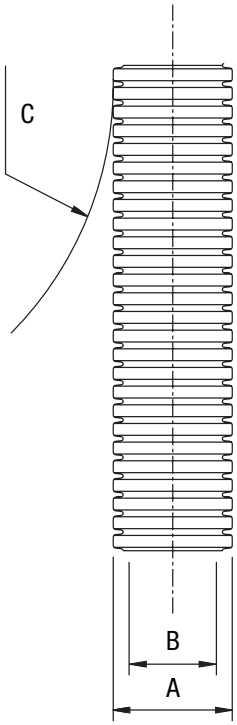

NC CONDUIT – PART NUMBERS AND DIMENSIONS

PART NO.	CONDUIT SIZE		DIMENSIONS (MM)			
	(NC)	(NW)	OUTSIDE DIA. (A)	INSIDE DIA. (B)	BEND RADI (C)	REEL LENGTH
NC16/OR/100M	16	13	16.05	11.70	30.0	100m
NC20/OR/50M	20	17	21.20	16.45	35.0	50m
NC25/OR/50M	25	22	25.80	21.10	40.0	50m
NC28/OR/50M	28	23	28.35	22.50	45.0	50m

*Other sizes available on request

MECHANICAL PROPERTIES

TEST TYPE	STANDARD	REQUIREMENT	STATUS
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 @ -15°C	IEC61386-1	No cracks <20% deformation min value	>6J
Dynamic bend radius @ -15 °C	IEC61386-23	5,000 cycles minimum	4xOD
Cold bend @ -40°C	NFR13-903	2xOD	Pass

THERMAL PROPERTIES

TEST TYPE	STANDARD	REQUIREMENT	STATUS
Minimum temperature	–	Permanent use static	-40°C
Minimum temperature	IEC 61386-23	Dynamic Use (5000 cycles @ minimum bend radius @ 40 reverse bends / minute)	-15°C
Maximum temperature	–	Permanent use	120°C
Max short term temperature	–	Permanent use	150°C
Max short term temperature	IEC 61386-23	Permanent use	175°C

FLAMMABILITY

TEST TYPE	STANDARD	REQUIREMENT	RESULT	VALUE
Oxygen index	ISO 4589-2	% Oxygen to support combustion	23	%
Flammability	UL94	Vertical (V0,V2) or Horizontal (HB)	HB	–
Flammability	BS EN IEC 61386-1	1Kw Burner @ 45° vertical burn	Pass	Pass/Fail
Flammability	FMVSS3042	≤100mm/min	0	mm/min

TOXICITY

TEST TYPE	STANDARD	REQUIREMENT	RESULT	VALUE
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 (hrs)	BS EN IEC 61386-1	23°C	50%

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