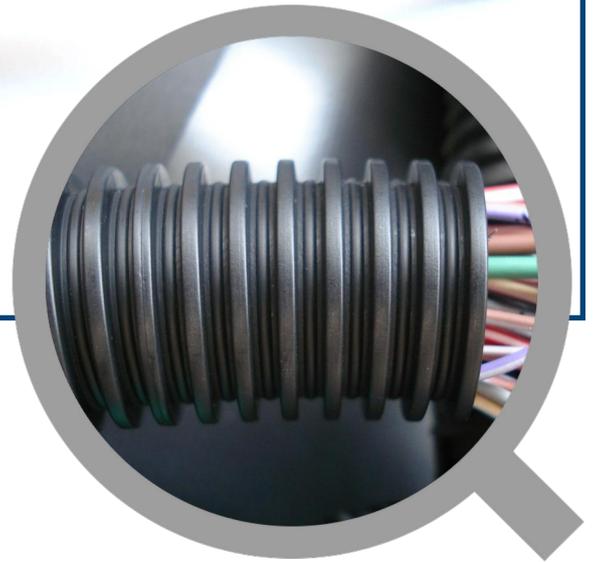


# Convolute Tubing



## NAG

NAG convoluted tubing is designed to protect and insulate wire harnesses in vehicles.

The ribs profile is conform to VW requirements and specifications.

It is suited for harsh environments and protects against mechanical risks: abrasion, crushing, chafing...

NAG has excellent chemical resistance.

Branching and fastening Delfingen accessories are compatible with the NAG profile (collars, elbows, T or Y fittings, clips...).

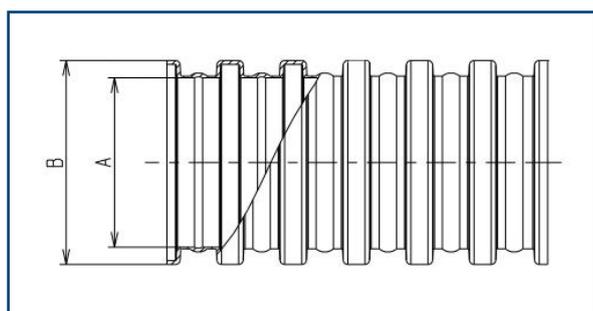
The tube can be delivered slit or non-slit. An assembly tool can also be supplied for easy installation over the wires.

## Characteristics

- **Colors:** standard color is black.
- **Material:** standard materials are shown in this table. A polypropylene material can also be proposed in a UL94 V-0 grade upon request, following validation steps.

Physical properties	Specification	Unit	High heat flame retardant polypropylene	High heat copolyester flame retardant
<b>Thermal properties</b>				
Continuous temp. of use - min/max (3000h)	-	°C (°F)	-40/130 (-40/266)	-40/150 (-40/302)
Peak temperature	-	°C (°F)	500h at 150 (302)	240h at 175 (347)
<b>Mechanical properties</b>				
Tensile strength at yield	ISO 527	MPa	24	-
Elongation at yield	ISO 527	%	7	-
Izod notched impact strength (23°C / 73°F)	ISO 180	kJ/m2	-	N
Izod notched impact strength (-30°C / -22°F)	ISO 180	kJ/m2	-	8
<b>Other properties</b>				
Density	ISO 1183	g/cm <sup>3</sup>	0.92	1.27
Flammability	FMVSS 302	-	self-extinguishing	self-extinguishing
Chemical resistance	Resists the majority of chemicals and automotive fluids (oils, coolant, battery fluid, brake fluid, fuels, windshield washer...)			

## Dimensions



Designation	ID ØA (mm)	OD ØB (mm)
NAG 4.5	4.7	7.2
NAG 7.5	6.4	10
NAG 10	9.3	13
NAG 13	12.3	15.5
NAG 17	16.2	21.2
NAG 22	20.2	25.6
NAG 26	25.5	31.3

## Approvals

Direct: Volkswagen Group.

## Packaging

NAG is delivered in containers, half-containers, coils or cut lengths from 15 to 2,000 mm (other lengths upon request only).

