



All Drossbach's products are compliant with the **European Union's Directive 2002/95/EU (RoHS) and REACH Regulation.**

Product Specifications

* Drossbach **IMDS submissions** are available for all products upon request.

Material & Code	Tech. Data Sheet	Delphi (Packard)	Ford	General Motors	Chrysler	ASTM	Flame Rating ④	UV Inhibitor	Resistance		Flexibility
									Chemical	Abrasion	

Polyethylene - Operating Temperature -40 to +93C (-40 to +200F)

DE	TD-013							No	Good	Excellent	Excellent
HV	TD-015							No	Good	Excellent	Excellent
KE	TD-018	M-2092						No	Good	Good	Excellent
PE	TD-013							No	Good	Good	Excellent
FE	TD-003					DR-006-SE	No	Good	Good	Good	Excellent
VE	TD-019					UL-94 V2	No	Good	Good	Good	Excellent
V0	TD-014					UL-94 V0	No	Good	Good	Good	Excellent
SE	TD-002		ESB-M4D152-A				No	Good	Good	Good	Excellent

Nylon - Operating Temperature -40 to +149C (-40 to +300F)

ND	TD-007		WSS-M4D933-A1 ES-XU5T-14A099-AA		MS-DB41 CPN 4059	D4066PA283	FMVSS 302	No	Good	Good	Good
NN	TD-022					ASTME 162 ASTME 662	See ASTM Flame Tests	Yes Note⑤	Good	Good	Good
NP	TD-008	M-2170		GMP.PA6.003 GM 7001-M-PA6	MS-DB41 CPN-2785	D4066PA260	UL-94 HB FMVSS 302	No	Excellent	Excellent	Excellent

Polypropylene - Operating Temperature -40 to +135C (-40 to +275F)

FP	TD-023					DR-006-SE	No	Good	Good	Good	Excellent
PP	TD-009						No	Excellent	Good	Good	Good
RP	TD-011	M-2262-001			MS-DB532-B CPN-2796		No	Excellent	Good	Good	Excellent
VP	TD-010					UL-94 V2	No	Good	Good	Good	Excellent

Polyester - Operating Temperature -40 to +160C (-40 to 320F)

PT	TD-001	M-2373						No	Excellent	Excellent	Excellent
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Products Listed are standard products. Unique sizes, materials & colours are available but are special order and subject to set-up & minimum quantities costs. Please, contact you Sales representatives for more info.

Notes:

- ① Designates preliminary dimensions of a new or modified product derived from initial statistical studies only and will be verified after further production runs.
- ② The "V0" product is designated **non-Halogenated product**
- ③ This product is manufactured with a "UV inhibitor" additive. Drossbach does not claim or state any UV life or warranty for this product
- ④ All "UL" and FMVSS 302 flame ratings are for the resin used to manufacture our product, not for our end product. The ratings are created by testing standard "UL" or FMVSS plaque specimens, not tubing samples.
- ⑤ The "NN" Material Code is not available in sizes larger than 1 1/2" ID (Dia Code 112). This product has been tested and will meet the requirements of UL 94 V1 and UV test method "Accelerated Weather Resistance 601.6kJ/m2 Exterior Exposure Xenon Arc Weatherometer (achieving a test result of Delta E < 3.0). This product has not been certified yet by UL due to the cost involved and the low sales volume. Documentation is available showing test results complying to these tests.

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DRAWING#: DWCS-001

REV#: 22

Product Dimensions

Nominal ID Diameter	Dia. Code	Units	Dimension "A" ID		Dimension "B" OD		Dim. "C" Wall Min	Dim. (E) Corr Ht. Ref.
			Min	Max.	Min	Max.		
1/4" (6 mm)	014	mm Inches	6.02 0.237	6.76 0.266	9.45 0.372	10.16 0.400	0.11 0.004	1.71 0.067
1/4" (7 mm)	07L	mm Inches	6.50 0.256	7.01 0.276	9.47 0.373	10.11 0.398	0.11 0.004	1.52 0.060
3/8" (9 mm)	038	mm Inches	8.66 0.341	9.65 0.380	12.59 0.496	13.36 0.526	0.12 0.005	1.91 0.075
3/8" (9 mm)	09L	mm Inches	9.35 0.368	10.11 0.398	12.56 0.494	13.32 0.524	0.12 0.005	1.61 0.063
7/16" (10 mm)	716	mm Inches	10.13 0.399	11.10 0.437	14.46 0.569	15.16 0.597	0.12 0.005	2.10 0.083
1/2" (13 mm)	13L	mm Inches	11.97 0.471	13.07 0.515	16.39 0.645	17.31 0.681	0.12 0.005	2.17 0.085
1/2" (13 mm)	012	mm Inches	12.01 0.473	13.11 0.516	16.87 0.664	17.78 0.700	0.12 0.005	2.38 0.094
5/8" (16 mm)	16L	mm Inches	15.11 0.595	16.08 0.633	18.59 0.732	19.56 0.770	0.12 0.005	1.74 0.069
5/8" (16 mm)	058	mm Inches	15.32 0.603	16.23 0.639	20.36 0.802	21.26 0.837	0.12 0.005	2.45 0.099
5/8" (17 mm)	17F	mm Inches	16.40 0.646	16.60 0.654	21.50 0.846	22.00 0.866	0.22 0.009	2.63 0.103
5/8" (17 mm)	17L	mm Inches	16.25 0.640	17.15 0.675	20.42 0.804	21.32 0.839	0.12 0.005	2.09 0.082
5/8" (18 mm)	18L	mm Inches	16.73 0.659	17.75 0.699	21.69 0.854	22.59 0.889	0.12 0.005	2.45 0.096
3/4" (19 mm)	034	mm Inches	17.96 0.707	19.28 0.759	24.13 0.950	25.12 0.989	0.12 0.005	3.00 0.118
3/4" (19 mm)	19L	mm Inches	18.97 0.747	19.86 0.782	23.10 0.909	23.86 0.939	0.12 0.005	2.03 0.080
7/8" (22 mm)	078	mm Inches	21.54 0.848	22.81 0.898	28.12 1.107	29.24 1.151	0.13 0.005	3.25 0.128
1" (23 mm)	23L	mm Inches	22.78 0.897	24.10 0.949	27.36 1.077	28.17 1.109	0.15 0.006	2.16 0.085
1" (25 mm)	100	mm Inches	25.91 1.020	27.16 1.069	31.78 1.251	33.13 1.304	0.15 0.006	2.96 0.117
1 1/8" (29 mm)	118	mm Inches	28.50 1.122	29.86 1.176	34.58 1.361	35.88 1.413	0.15 0.006	3.03 0.119
1 1/4" (30 mm)	114	mm Inches	30.45 1.199	31.93 1.257	36.73 1.446	38.10 1.500	0.15 0.006	3.11 0.123
1 1/2" (40 mm)	112	mm Inches	39.78 1.566	41.83 1.647	47.42 1.867	49.45 1.947	0.15 0.006	3.82 0.150
2" (51 mm)	200	mm Inches	50.01 1.969	51.77 2.038	58.04 2.285	60.66 2.388	0.28 0.011	4.23 0.167
2 1/2" (64 mm)	212	mm Inches	62.15 2.447	63.90 2.516	70.39 2.771	73.01 2.874	0.28 0.011	4.34 0.171
3 1/2" (89 mm)	312	mm Inches	88.41 3.481	90.41 3.559	97.00 3.819	100.00 3.937	0.28 0.011	4.55 0.179

Dimension "D" Cut-To-Length Specifications

Less than or equal to 400mm or 15.75" +/- 10mm or 0.394"	Greater than 400mm or 15.75" +/- 2.5% of target length
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Note: (A) Product tolerances are general and are designed to encompass all available materials. Tighter tolerances may be available for a specific material.

(B) Product with an I.D. > 1.0" will not meet the std. cut length tolerances listed above. Special cut length tolerance will be given on a case to case basis.

All dimensions are in both Imperial and Metric. Do Not Scale Drawing.

				Convuluted Tubing	
MATERIALS: N/A		FINISH: N/A		SCALE: N/A	
INTERPRET GEOMETRIC TOLERANCES PER: N/A		Tol.: .XX --- .XXX ---		ANGLES +/-	
APPROVAL: Janet Mann		APPROVAL: Neil Coleman		DATE: 08/20/13	