



Some sizes of this product is also available with optional smooth wall cuffed ends see **DWCS-002**

### 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 (2)	UV Inhibitor (4)	Resistance		Flexibility
									Chemical ** See Note	Abrasion	

#### Polyethylene - \* Continuous Operating Temperature -40 to +85C (-40 to +185F). \*Short Term -40 to 93C (-40 to +200F)

DE	TD-013							No	Good	Good	Excellent
HV	TD-015							No	Good	Good	Good
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	Excellent
② VE	TD-019						UL-94 V2	No	Good	Good	Excellent
① ② V0	TD-014						UL-94 V0	No	Good	Good	Excellent
SE	TD-002		ESB-M4D152-A					No	Good	Good	Excellent
⑥ UC	TD-017							Yes	Good	Good	Excellent
④ UV	TD-024							Yes	Good	Good	Excellent

#### Nylon - \* Continuous Operating Temperature -40 to +125C (-40 to +257F). \*Short Term -40 to 149C (-40 to +300F)

② ③ ND	TD-007		WSS-M4D933-A1 ES-XU5T-14A099-AA	MS-DB41 CPN 4059	D4066PA283	UL-94 HB (3) FMVSS 302	No	Good	Excellent	Good
② ③ NP	TD-008	M-2170		GMP.PA6.003 GM 7001-M-PA6	MS-DB41 CPN-2785	D4066PA260 UL-94 HB (3) FMVSS 302	No	Good	Excellent	Good
④ NU	TD-012						Yes (4)	Good	Excellent	Good

#### Polypropylene - \* Continuous Operating Temperature -40 to +125C (-40 to +257F). \*Short Term -40 to 135C (-40 to +275F)

FP	TD-023					DR-006-SE	No	Good	Good	Good
PP	TD-009						No	Good	Good	Good
② ③ P0	TD-004					UL-94 V0 (3)	No	Good	Good	Good
RP	TD-011	M-2262-001			MS-DB532-B CPN-2796		No	Good	Good	Excellent
② VP	TD-010					UL-94 V2	No	Good	Good	Good

#### Polyester - \*Continuous Operating Temperature -40 to +150C (-40 to +302F). \*Short Term -40 to +170C (-40 to +338F)

PT	TD-001	M-2373					No	Good	Good	Excellent
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\* The "Continuous Operating Temperatures" for each material is considered to be a minimum of 3000 hrs at the stated temperatures. The "Short Term" Operating temperatures is considered to be minimum of 168Hrs @ the stated temperatures

\*\* Chemical Ratings are just general descriptive ratings. For more detailed Chemical Resistance information see **Drossbach's Chemical Resistance charts (CR-XXX series)**. These Documents can be cross referenced using Drossbach's Technical Data sheets listed above. Both documents (TD Sheets and Chemical Resistance charts) can be downloaded from our website [www.drossbach.com](http://www.drossbach.com) or by request.

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

#### Notes:

- The "V0" product is designated **non-Halogenated product**
- All UL & FMVSS 302 flame ratings are for the resin used to manufacture our product, not our end product. Testing of standard plaque not tubing.
- This product has been tested and will meet the requirements of UL 94 V0 or HB (as stated in the above chart). This product has not been certified yet by UL but Documentation is available showing test results complying to the UL test.
- Based on our "UV" stabilizer supplier recommendation, the percentage used allows for a 3-5 Year weather able product.
- This product is manufactured with a "UV inhibitor" additive. Drossbach does not claim or state any UV life or warranty for this product (see TDS-024)
- This product has limited "UV" protection created by increased amount of Carbon Black blended into it's composition (see TDS-017).

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**DRAWING#: DWCS-001**

**REV#: 31**

### Product Dimensions

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

Dimension "D" Cut-To-Length Specifications for Product <20' (<6096 mm) Product >20' (>6096 mm) in length is considered to be "Bulk" Product

Less than or equal to 400mm or 15.75" +/- 0.0mm or 0.394"	Greater than 400mm(15.75") < 6096 mm 20' +/- 2.5% of target length
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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.

#### Note:

- Product tolerances are general and are designed to encompass all available materials. Tighter tolerances may be available for a specific material.
- 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.

				<b>Convuluted Tubing</b>	
IATF 16949 & ISO 9001 registered					
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: 10/05/18			